

DIVISION OF OIL, GAS AND MINING

ACE DISPOSAL

Michael O. Leavitt Governor Kathleen Clarke Executive Director Lowell P. Braxton Bivision Director 801-359-3940 (Fax) 801-538-7223 (TDD)

1594 West North Temple, Suite 1210 PO Box 145801 Salt Lake City, Utah 84114-5801 801-538-5340 801-359-3940 (Fax)

April 20, 1999

Mike Keele Ace Oilfield Disposal Inc. 827 South 1500 West Vernal, Utah 84078

Approval to Operate Produced Water Evaporation Pit # 5, Ace Oilfield Disposal Facility, Section 2, Township 6 South, Range 20 East, Uintah County, Utah

Dear Mr. Keele:

The Division has inspected the evaporation pit at the above referenced location and has found it to be in compliance with current regulations. This pit is therefore approved for the disposal of produced water.

Please be reminded that the pit is to have at least 2 feet of freeboard at all times and that spraying of water should be closely monitored. Excessive overspray is considered as an illegal surface discharge and can result in closure of the facility. Please provide quarterly reports to this office which contain copies of documentation of weekly leak detection inspections as well as an accounting of the volume of water disposed of at this facility.

If you have any questions concerning this approval please contact Brad Hill or Gil Hunt at this office.

Sincerely,

Jolin R. Baza

Associate Director



DIVISION OF OIL, GAS AND MINING

MF. DISPOSAL

Michael O. Leavitt Governor Kathleen Clarke Executive Director Lowell P. Braxton Division Director

1594 West North Temple, Suite 1210 PO Box 145801 Salt Lake City, Utah 84114-5801 801-538-5340 801-359-3940 (Fax) 801-538-7223 (TDD)

June 18, 2002

Mike Keele Ace Oilfield Disposal 827 South 1500 West Vernal, Utah 84078

Approval to Operate Oilfield Waste Composting Site; Sec. 2, T. 6S., R. 20E., Uintah County, Utah Re:

Dear Mr. Keele,

The Division received the application to operate a waste composting pit at your produced water disposal facility on May 28, 2002. Your request to landfarm drilling muds, cuttings and onsite generated oily waste meets Division requirements. Your request is hereby approved.

This permit is valid for the remediation of RCRA exempt Exploration and Production oily wastes only, such as waste crude oil, tank bottoms, drilling mud and cuttings. At no time is any non-exempt waste or refuse to be accepted, stored or remediated at the site. There is to be no free-standing oil within the confines of the composting area at any time. Current records shall be kept of all materials received by the facility. For the duration of this permit the Division shall be provided with monthly reports which include the volume and types of materials received as well as the volumes of materials which have been determined to be successfully remediated during the month. The Division shall be consulted prior to any changes in your operational procedure to allow for any needed amendments to this permit. The Division shall also be notified prior to moving any remediated material from the composting area. Prior to abandonment, the landfarmed material must meet cleanup levels for salinity and hydrocarbons as follows:

> Electrical conductivity <4mmho/cm or background, whichever is less. Total petroleum hydrocarbons of 10,000 ppm or background, whichever is less.

This approval does not exempt you from complying with all other federal, state and local rules and ordinances.

If you have any questions concerning this letter please contact Brad Hill at (801) 538-5315 or Gil Hunt at (801) 538-5297.

er

cc: Uintah County Planning Office



## WOLVERINE GAS AND OIL CORPORATION

Energy Exploration in Partnership with the Environment

March 10, 2004

United States Department of the Interior Bureau of Land Management Richfield Field Office 150 East 900 North Richfield, Utah 84701

RE: Designated Agent Contact Information: Wolverine Federal #17-2

To Whom It May Concern:

Wolverine Gas and Oil of Utah, LLC (Wolverine) is designating Western Land Services, Inc. as Agent for the Wolverine Federal #17-2. Questions, deficiencies and clarifications regarding this APD package should be directed to the following contacts with Western Land Services, Inc:

**Donald Anderson** 

54 West Seymour, Sheridan, WY 82801

Office: 307-673-1817 Cell: 307-752-7200

E-mail: don.anderson@westernls.com

OR: Shawn Burd

Cell: 307-751-5156

E-mail: shawn.burd@westernls.com

Approvals or other notifications should be directed to me at Wolverine and to the Agent named above. My contact information is as follows:

Richard Moritz
Wolverine Gas and Oil Company of Utah, LLC
One Riverfront Plaza, 55 Campau NW
Grand Rapids, MI 49431

Office Phone: (616) 458-1150 (ext. 119)

E-mail: rmoritz@wolvgas.com

Sincerely,

Wolverine Gas and Oil Company of Utah, LLC

Richard Moritz

Vice-President, Land & Legal



RECEIVED MAR 1 6 2004 DIV. OF OIL, GAS & MITCHG

March 15, 2004

Utah Division of Oil, Gas and Mining C/o Diana Whitney 1594 West North Temple, Suite 1210 Salt Lake City, Utah 84114-5801

Wolverine Federal #17-2; T23S - R1W, Section 17: SE/SW, Sevier County, Utah RE:

#### Dear Diana:

On Friday, March 12, 2004 I submitted the Wolverine Federal #17-2 APD and POD to the Bureau of Land Management, Richfield Field Office. I talked with List a Cordova this afternoon to inform her that I would be submitting the same information to your office. Lisha informed me that I needed to send this to your attention, since you initially review the packet for comp eteness.

Please feel free to sall me at (435) 896-1943 office or (307) 751-0330 cell, should you have any further questions.

Sincerely,

Anthorized Agent for Wolverine Gas and Oil Company of Urah, LLC

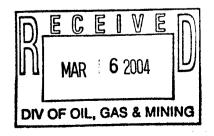
FORM APPROVED Form 3160-3 OMB No. 1004-0136 Expires January 31, 2004 (September 2001) UNITED STATES Lease Serial No. DEPARTMENT OF THE INTERIOR UTU-73528 BUREAU OF LAND MANAGEMENT 6. If Indian, Allotee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7 If Unit or CA Agreement, Name and No. REENTER DRILL la. Type of work: Wolverine Fed. Exploration Unit 8. Lease Name and Well No. Wolverine Federal #17-2 Single Zone Oil Well Gas Well Multiple Zone lb. Type of Well: 9. API Well No. Name of Operator Wolverine Gas and Oil Company of Utah, LLC 10. Field and Pool, or 3b. Phone No. (include area code) 3a. Address One Riverfront Plaza, 55 Campan NW Exploratory 616-458-1150 Grand Rapids, MI 49503-2616 11. Sec., T. R. M. or Bik. and Survey or Area Location of Well (Report location clearly and in accordance with any State requirements.\*) 38.797 39 869' FSL & 1901' FWL At surface SE/SW SESW, Section 17, T23S-R1W -111.93390 SAME At proposed prod. zone 13. State 12. County or Parish 14. Distance in miles and direction from nearest town or post office UT Sevier 5.9 miles South of Sigurd, Utah 17. Spacing Unit dedicated to this well 16. No. of acres in lease 15. Distance from proposed location to neare property or lease line, ft.
(Also to nearest drig, unit line, if any) 20. BLM/BIA Bond No. on file 19. Proposed Depth 18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. WY 3329 9.100 ft. 22. Approximate date work will start\* 23. Estimated duration 21. Elevations (Show whether DF, KDB, RT, GL, etc.) Drilling: 60 days 05/25/2004 5834.5' - GL 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form: 4. Bond to cover the operations unless covered by an existing bond on file (see 1. Well plat certified by a registered surveyor. Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan) (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). 5. Operator certification Such other site specific information and/or plans as may be required by the autrorized officer. Name (Printed/Typed) 25. Signature

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

CONFIDENTIAL



<sup>\*(</sup>Instructions on page 2)

# **Table of Contents**

Master Drilling Prognosis	
Estimated Tops of Geologic Marker	1
Estimated Depth of Anticipated Water, Gas or Mineral Formations	1
Proposed Casing and Cementing Program	1
Mud Program	3
Testing, Logging and Coring	3
Pressure Control Equipment- (schematic attached)	4
Abnormal Conditions	

Anticipated Dates......6

# **WOLVERINE GAS & OIL OF UTAH, LLC**

### Wolverine Federal #17-2 SE SW SEC. 17-T23S-R1W SEVIER CO., UTAH

## **DRILLING PROGNOSIS**

# 1. Estimated tops of important geological markers - TVD:

5,835 ASL Estimated G.L. 5,858 ASL Estimated K.B.

Formation Quaternary Arapien Twin Creek 1 Navajo 1 Kayenta Wingate SS Twin Creek 2 Navajo 2 Total Depth	Lithology Unconsolidated sediments Shale, siltstone, salt, evaporites Carbonates Sandstone w/ minor shale Sandstone w/ minor shale Sandstone w/ minor shale Carbonates Sandstone w/ minor shale	Interval 0'-400' 400'-5,518' 5,518'-5,810' 5,810'-7,036' 7,036'-7,184' 7,184'-7,750' 7,750'-8,062' 8,062'-9,059' 9,100'
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# 2. Estimated depths of anticipated water, oil, gas or mineral formations:

Formation Navajo 1 Kayenta Wingate SS Navajo 2	Interval 5,810'-7,036' 7,036'-7,184' 7,184'-7,750' 8,062'-9,100'	water/gas/oil - possible water possible water possible water/gas/oil - possible
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# 3. Proposed hole sizes, casing size and cementing program:

The proposed well will be drilled to a TVD of 9,100°. There is no directional work planned.

## A.) Hole size and casing program:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	10.0 (0)	54.5#	K-55	STC	0'-1,500'
17½"	13-3/8" 9-5/8"	53.5#	S-95	LTC	0'-5,620'
12 <sup>1</sup> / <sub>4</sub> " 7-7/8"	9-3/8 5½"	17#	L-8()	LTC	0'-9,100'

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in ()H, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
17½"	13-3/8"	12.459	14.375	0.6946	N/A	0.8679
121/4"	9-5/8"	8.379	10.625	0.3127	0.3627	0.3973
7-7/8"	5½"	4.767	6.050	0.1733	0.2323	0.1305

Casing Mechanical Properties:  Casing Size	13-3/8"	9-5/8"	5-1/2"
Casing Grade	K-55	S-95	L-80
Wt. of Pipe #/ft	54.5	53.5	17
Setting Depth	1500	5620	9100
Max Mud Weight Inside	8.5	10.7	8.9
Max Mud Weight Outside	8.5	10.7	8.9
Desired Cement Top	Surface	4620	5400
Desired Cemera 70F			
Hydrostatic Inside (dry outside), psi	678.0	3142.0	4226.5
Min. Internal Yield, psi	2730	9410	7740
Burst Safety Factor	4.03	2.99	1.83
Buist Salety Luctor			
Hydrostatic Outside (dry inside), psi	678.0	3142.0	4226.5
Collapse Resistance, psi	1130	7330	6280
Collapse Safety Factor	1.67	2.33	1.49
Weight in Air, 000's of #'s	81.75	300.67	154.7
Body Yield, 000's of #'s	853	1477	397
Joint Strength, 000's of #'s	547	1220	348
Ratio – Weight/Body Yield	0.0958	0.2036	0.3897
Tension Safety Factor	6.69	4.06	2.25

Casing strings will be pressure tested to 0.22 psi/foot of casing string length or 1500 psig, whichever is greater (not to exceed 70% of the internal yield of the casing), after cementing and prior to drilling out from under the casing shoe.

A pressure integrity test will be done at each casing shoe. The formation at the shoe will be tested to a minimum of the mud weight equivalent anticipated to control formation pressure to the next casing depth. This test will be performed before drilling more than 20' of new hole.

### B) Cementing program:

Surface Casing:

Cement job is designed to circulate cement to surface. Slurry yield is 1.20

 $ft^3/sx.$ , 15.6 ppg

1,750 sx Premium Plus Cement w/ 94#/sx Premium plus (cement - API), 2% Calcium Chloride (accelerator) and 0.25#/sx Flocele (fluid loss additive).

Intermediate Casing: Cement job is designed for 1,000' of fillup. Slurry yield is 1.71 ft<sup>3</sup>/sx., 13 ppg.

> 285 sx 50/50 Poz Premium AG w/ 3% total Bentonite (light weight additive), 0.4% Halad®-567 (low fluid loss control), 0.3% D-AIR 3000 (defoamer), 15% Salt (salt) BWOW, 5#/sx Gilsonite (lost circulation additive) and 0.25#/sx Flocele (lost circulation additive).

**Production Casing:** 

Cement job is designed for 3,680' of fillup (200' into 9-5/8" intermediate casing.) Slurry yield is 1.47 ft<sup>3</sup>/sx.

Lead Cement: 350 sx 50/50 Poz Premium foamed w/ N2 to 11 ppg w/ 5#/sx Silicalite Compacted (cement material), 20% SSA-1 (cement material), 0.2% Versaset (thixotropic additive), 0.3% Diacel LWL (low fluid loss control) and 1.05% Zonesealant 2000 (foamer).

Tail Cement: 80 sx 50/50 Poz Premium (unfoamed - 14.3 ppg) w/ 5#/sx Silicalite Compacted (cement material), 20% SSA-1 (cement material), 0.2% Versaset (thixotropic additive) and 0.3% Diacel LWL (low fluid loss control)

4. Mud Program:

Interval	Mud Type and Characteristics
Surface to 1,500'	Fresh water mud, 3.5 ppg
1,500' to 5,620'	Salt saturated muci, max 10.7 ppg
5,620' to 9,100' TD	Fresh water mud, LSND, max 8.9 ppg

Sufficient mud material to maintain mud properties, control loss circulation and contain a blowout will be available at the well site during drilling operations.

### 5. Formation Evaluation Program:

A) Cores:

none anticipated

B) DST's:

none anticipated

C) Mud Log:

1,500' to 9,100'TD

D) Electric Logs:

Dipole Sonic w/ GR

Array Induction w/ GR & Caliper

LithoDensity/Neutron w/ GR & Caliper

Repeat Formation Tester (20 sets/1 sample)

1,500'-5,620'	5,620'-9,100' TD
Optional	Optional
Yes, GR to surf	Yes
Cptional	Yes
Cptional	Yes
No	Optional

Sidewall Cores (approx 20 cores)	No	Optional_
Sidewait Coles (approved to the coles of the		

- 6. Pressure Control and Safety Equipment:
- A) Type: 13-5/8" double gate hydraulic BOP with 13-5/3" annular preventer. The BOP will be equipped as follows:
  - 1) One blind ram (above)
  - 2) One pipe ram (below)
  - 3) Drilling spool with two side outlets (choke side 3" minimum, kill side 3" minimum).
  - 4) 3" diameter choke line
  - 5) Two choke line valves (3" minimum)
  - 6) Kill line (3" minimum)
  - 7) Two chokes with one remotely controlled from the rig floor
  - 8) Two kill line valves and a check valve (3" minimum)
  - 9) Upper and lower kelly cock valves with handles available
  - 10) Safety valves and subs to fit all drill string connections in use
  - 11) Inside BOP or float sub available
  - 12) Pressure gauge on choke manifold
  - 13) Fill-up line above the uppermost preventer
- B) BOP Stack Pressure Rating: 5,000 psig, intermediate casing through production string.
- C) Testing Procedure:

#### **Annular Preventer**

The annular preventer will be pressure tested to 50% of the rated working pressure for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

#### **Blowout Preventer**

The BOP, choke manifold and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the casing with a test plug) or to 70% of the internal yield of the casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

1) When the BOP is initially installed

- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

## D) Choke Manifold Equipment:

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

#### E) Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above precharge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations.

The BOP system will have two independent power sources available for powering the closing unit pumps. Sufficient nitrogen bottles are suitable as a backup power source only, and shall be recharged when the pressure falls below manufacturer's specifications. The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to precharge).

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The BOP and related pressure control equipment will in installed, tested and maintained in compliance with the specifications in and requirements of Onshore Oil & Gas Order number 2.

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 125 feet from the center of the drill hole to a separate flare pit.

F) Pit Alarms & Flow Sensor:

Once surface casing has been set and the BOP nippled up, a flow sensor will be utilized in the flow line and pit level sensors will be used until the well has production casing installed or is

### 7. Abnormal Conditions:

- No abnormal temperatures or pressures are anticipated. No H2S has been encountered in A. or known to exist from previous wells drilled in the general area. However, a H2S contingency plan has been attached for the drilling; of the Navajo section as a precautionary measure.
- The Arapien section is expected to be highly deformed and heterogeneous shales, B. siltstones, evaporates and salt. Previous experience has shown this to be a difficult interval to drill from a hole stability, fluid loss and pipe sticking standpoint.

### 8. Anticipated Stating Date:

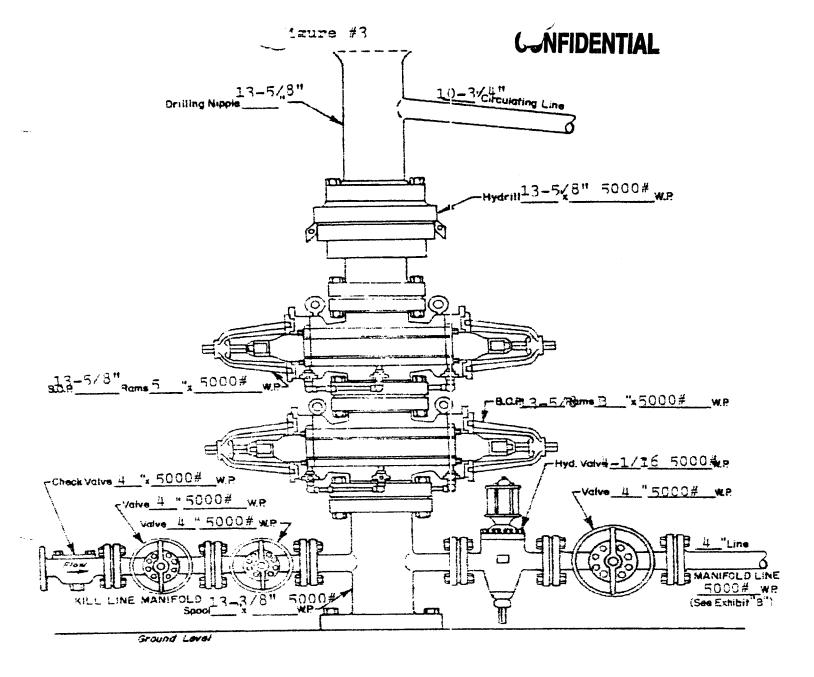
Anticipated commencement date Drilling days

Completion days

May 25, 2004 approximately 60 days approximately 14 days

## 9. Notification of Operations:

Utah Division of Oil, Gas, and Mining (Salt Lake City) 801-538-5340 United States Bureau of Land Management (Richfield Office) 435-896-1500



WELL HEAD B.O.R 5000# #WP

☐ Manuel

☐ Hydraulic

## PROJECT PLAN OF DEVELOPMENT AND MASTER SURFACE USE PLAN

## **Wolverine FEDERAL #17-2**

NAME OF APPLICANT:

Wolverine Gas and Oil Company of Utah,

LLC

One Riverfront Plaza, 55 Campau NW Grand Rapids, Michigan 49503-2616

PROJECT NAME:

"Wolverine Federal #17-2"

SE/SW of Section 17

Township 23 South - Range 1 West

ATTACHMENTS:

A.) Project Map/Survey

B.) Well Site Location Layout

C.) Typical Cross Sections (Cut and Fill)D.) Wildlife & Vegetative Species of

Concern Summary

E.) H2S Contingency Plan

F.) Cultural Resource Survey Report

#### I. DESCRIPTION OF PROJECT:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) proposes to drill and explore for hydrocarbons from the Navajo Formation at depths of approximately 4,810' – 7,036' and approximately 8,062' – 9,100' within the Wolverine Federal Exploration Unit situated in Sevier County, Utah:

## TOWNSHIP 23 SOUTH, RANGE 1 WEST

Southeast Quarter of Southwest Quarter (SE/SW) of Section 17



√ell Name & No.	Target	Elev.	Location	TD	Footages
LEASE # UTU-73528	T				
Wolverine Federal #17-2	Navajo 1 and 2	5,835'	SE SW Sec : 7, T23S-R1W	9,100'	869' FSL; 1,901' FWL

The attached Project Map (Attachment A) indicates the proposed well site and its intended configuration. Additionally, the proposed access route is indicated. This well is being drilled within the "Wolverine Federal Exploration Unit" and upon federally owned surface administered by the Bureau of Land Management, United States Department of the Interior.

Mineral rights within the Wolverine Federal Exploration Unit are owned by a variety of interests and are federally owned at the target bottom-hole location for this proposed well. The proposed surface plan will be reviewed and inspected by the appropriate regulatory agencies, state and federal, to ensure proper utilization of the surface reflecting an effort by Wolverine to minimize surface disturbance and waste. Appropriate Onshore Oil and Gas Orders and those of the Utah Division of Oil, Gas and Mining will be followed in the constructing, drilling, completion, operation, plugging and surface reclamation of this well.

The project is situated within an area that is referred to by the Utah Division of Oil, Gas and Mining (Statement of Basis, Kings Meadow Ranches 17-1, October 21, 2003) as "... placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range – Colorado Plateau transition zone." The drill site itself is located in a flat area between steep hills and is contiguous to Highway 24 from which access to this site will be established. The flat area is dominated by sagebrush – grass communities and the nearby hillsides are dominated by Pinyon Pine – Juniper communities. The access route will consist of an improved driveway off from Highway 24 entering onto the well site. BLM road construction standards will be adhered to as new improvements are constructed.

Wolverine's proposed "Wolverine Federal #17-2" project is most easily accessible from Sigurd, Utah. From Sigurd, one would drive down Highway 24 heading east/southeasterly. At mile marker 14, drive approximately 0.2 miles and turn westerly onto the access road heading onto the well site. Drive approximately 100 yards to the proposed well pad location.

Surface water is located in the area primarily in the form of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek. Local springs arising from the volcanic rocks and ephemeral drainages also exist in the area including a drainage way

Project Plan of Developme & Surface Use Plan Wolverine Gas and Oil of LLC Wolverine Federal #17-2



situated along Highway 24. The Sevier River is approximately three (3) miles west of this proposed location.

## Geology and Soil Types

Again quoting from the "Division of Oil, Gas and Mining, Statement of Basis, Kings Meadow Ranches 17-1", the well "...will likely spud into a thin alluvium covering the evaporate-rich Jurassic age Arapien shale." "The Arapien Shale may have been somewhat intruded or elevated into the area between the Sevier Fault and the considerable parallel secondary faulting mapped in the Cedar Mountain – Black Mountain area..." It is anticipated that from surface to approximately 400 feet in depth, the lithology of the Quaternary will consist of unconsolidated sediments.

The soil type classified at the Wolverine Federal #17-2 wellsite is the Billings silty clay loam. This soil type is a fine-silty, mixed calcareous, mesic Typic Torrifluvents and is usually found in areas containing two (2) to five (5) percent slopes. The soil is a deep, drained, silty clay loam. It features a light gray, moderately alkaline, strongly calcareous, silty clay loam surface soil that is approximately ten (10) inches thick. The subsoils consist of a light gray, moderately alkaline, friable, silty clay loam approximately 32 inches thick. The substrate material is a light gray, moderately alkaline, friable, silty clay loam with a small amount of gypsum veining.

Assuming that the drilling and completion of this well results in its ability to commercially produce hydrocarbons, appropriate market connections will be made upon proper permitting of such activities by all agencies having jurisdiction over said activities.

## II. SOIL EROSION CONTROL MEASURES:

The well pad will be sloped at about 1%, in the direction of the site's drainage so as to provide for a well-drained work area during drilling operations. Appropriate collection and infiltration basins will be constructed in the sloped area of the drill pad.

In all fill areas, the edges shall be diked to control run off.

Appropriate drill site drainage and sedimentation control measures will be incorporated in the operational plan. These may include utilization of earthen dikes along the fill portion of the drilling pad perimeter, stabilization of slopes as needed, location of the reserve pits in the cut portion of the drilling pad and the pad constructed so as to slope toward a collection and infiltration basin. Construction of the drill site shall be in accordance with the regulations and stipulations as defined by the State of Utah, Department of Natural Resources, Division of Water Rights.

Reclamation of the site will be in accordance with Best Management Practices and requirements of the Bureau of Land Management.

## III. PROPOSED ACCESS ROADS AND ROAD IMPROVEMENTS

The proposed new access road that is to be constructed is identified and labeled on the project map. Steep, rough topography is not identified as a problem along our access route which will be constructed by initially using fill material and covering it with approximately eight (8) inches of shale/gravel. Another layer of road base material, approximately four (4) inches in depth, will be placed on top of the shale/gravel.

#### IV. LOCATION OF EXISTING WELLS

The recently drilled "King Meadow Ranches 17-1" well is situated approximately one-half mile northerly of this proposed well site location and is situated in the Southeast Quarter of the Northwest Quarter (SE/NW) of Section 17, Township 23 South, Range 10 West, Sevier County, Utah.

#### V. LOCATION AND TYPE OF WATER SUPPLY

Water for drilling the Wolverine Federal #17-2: will be purchased from water wells nearby or drilled on location and pumped into storage tanks at the site. Water for drilling from nearby well(s) will be hauled to location and stored in storage tanks on the drill site. Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

#### VI. CONSTRUCTION MATERIALS

In most circumstances, natural earth materials will be used for the construction of roads and fills. These will be taken from locations essentially contiguous to or nearby the locations to be improved. When necessary, road base materials will be used and delivered by the contractor for application on site and specifically as the initial fill material for the access road is then covered with approximately eight (8) inches of shale/gravel.

#### VII. METHODS FOR HANDLING WASTE

The Reserve Pit will be dug on the well pad per the attached Well Site Location Layout (Attachment B). It will be used for the disposal of waste mud and drill cuttings and will be located on the west/southwesterly portion of the well site plan. The pit will be 125 feet X 225 feet and will be 10 feet deep. The pit will be lined with a synthetic liner having a minimum thickness of 12 mills and if the reserve pit is built in rock, geotextile or some other material approved by the Division of Oil, Gas and Mining shall be utilized. The Division of Oil, Gas and Mining shall be notified prior to lining the reserve pit in order to allow for Division inspection. Rules pursuant to R649-3-16 will be followed regarding

Project Plan of Development & Surface Use Plan Wolverine Gas and Oil of Lah, LLC Wolverine Federal #17-2



the reserve pit as well as those governing Onshore Oil and Gas Operations (43 CFR 3160.)

Upon evaporation of fluids, pit closure occurs with the back fill of soil and its compaction to prevent settling. The usage of the pit is further described in the section VIII under pit closure.

All garbage will be taken off site and disposed of properly. Pursuant to R649-3-14, all rubbish and debris shall be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type. Sewage is handled through the renting of portable toilets. These are serviced by the rental company and removed from site when no longer required.

## VIII. PLANS FOR RECLAMATION OF THE SURFACE

Pit closure: The pits will be fenced on three sides during all drilling operations and then the fourth side will be immediately fenced when the rig is moved off location. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of the drilling and completing of the well. If necessary after 90 days, the fluids will be sucked out of the pit and transported off site.

The topsoil will be stripped off and stock piled in an area not to be disturbed. The topsoil will be placed back on the pit after back filling and then prepped for re-seeding.

The approximate Pit size is indicated on the Well Site Location Layout diagram attached hereto (Attachment B).

Revegetation Methods: Disturbed areas will be disked, seeded and "dragged", as needed; seeding with a mixture approved by the local USDA Natural Resource Conservation Service or the Bureau of Land Management.

Wolverine generally requires at least twelve (12) pounds per acre of seed distribution. Wolverine suggests that autumn seeding practices be used due to the terrain in this project area. Spring rain events are common and tend to cause severe run-off. Fall seeding will allow any moisture, whether rain or snow, to assist the seed into the ground.

Other Practices: Other practices that will be utilized to reclaim disturbed areas will include riprap when and if necessary to prevent erosion and the installation of silt fencing in sensitive and/or erosive areas.

<u>Timetable:</u> Reclamation of the surface will commence as soon thereafter construction, drilling and well completion are concluded, as is practicable, depending on

Project Plan of Development & Surface Use Plan Wolverine Gas and Oil of LLC Wolverine Federal #17-2



weather. In the event of a dry hole, the drill site and roadways will be restored to their original condition as nearly as practicable within 180 days after plugging date of the well.

### IX. SURFACE OWNERSHIP

The surface of the proposed well site is federally owned and is administered by the Bureau of Land Management, United States Department of Interior.

## X. WELLSITE LAYOUT

Please see the attached "Well Site Location Layout" (Attachment B) for the well configurations.

## XI. PIPELINES AND STREAM CROSSINGS

PIPELINES: In the event of hydrocarbon production requiring transmission by pipeline, the proposed pipeline(s) will be designed, constructed, tested, operated and maintained in accordance with standard safety practices and by a combination of construction techniques intended to minimize to the greatest extent practical the impacts upon natural resources.

Pipelines will typically be installed by trenching. In these trenched areas, the contractor shall strip and stockpile topsoil to be replaced over the backfill upon completion of construction operations. Silt fencing will be installed at all stream crossings.

The proposed pipelines will be constructed with a combination of methods intended to minimize impacts to private, state and federally owned property, county roads and natural resources. The pipeline will be constructed by a combination of conventional construction techniques and special measures designed to minimize impacts to natural resources. Pipelines will be adequately compacted before the topsoil is replaced for reseeding.

In general and where required, soil erosion control measures will consist of appropriate BMPs (Best Management Practices) to reduce the potential for erosion. The BMPs that will be utilized in upland areas include use of construction barriers where appropriate, land clearing, spoil piles, staging and scheduling, seeding and mulching. Note that spoil piles will not typically be seeded since exposure of the spoil piles should be minimal in time. All other proper BMP measures will be implemented to reduce the potential for erosion. Seeding of all raw soils after burial of pipe will be performed. However, mulching will be performed only within state or county road right-of-ways.

Project Plan of Developmant & Surface Use Plan Wolverine Gas and Oil of Lah, LLC Wolverine Federal #17-2



Generally speaking, in wetlands, appropriate BMPs will be implemented to minimize the potential for soil erosion within wetland construction zones. These measures shall include, but not be limited to, clearing, barriers, staging, filters, silt fencing, spoil piles, dewatering, seeding, and mulching.

### XII. GENERAL

TIMELINE: The following is a general order of construction and sequence of earth change by which our operations will proceed:

- 1.) Access Road and Well Pad Construction
- 2.) Drilling and Well Completion Operations
- 3.) Initial Well Pad Restoration
- 4.) Clearing of Pipeline Rights-of-way (if needed)
- 5.) Delivery and Layout of Pipe
- 6.) Pipe Welding and Inspection
- 7.) Trenching of Pipe
- 8.) Placement and Burying of Pipe
- 9.) Final Restoration of Site/Access/Pipeline Route
- 10.) Re-Seeding

All hillsides, creek banks, and other places where contractor has moved earth to facilitate operations shall be restored to as near original condition as practical. Replaced material and/or backfill will be protected from erosion to the satisfaction of Wolverine, the Bureau of Land Management and the Utah Division of Oil, Gas and Mining without undue delay.

Upon completion of any backfill, contractor shall clear pipeline rights-of-way and access routes of large rocks, stumps and other debris; fill holes, ruts and depressions, and shall keep the access road in a neat and acceptable condition. All cleanup shall be maintained by the contractor until final acceptance by Wolverine and the enforcing agency.

Project Plan of Develops t & Surface Use Plan Wolverine Gas and Oil of Utah, LLC Wolverine Federal #17-2



## XIII. ENVIRONMENTAL IMPACT ASSESSMENT:

It is anticipated that the drilling and operations planned, provided the success of this well, will not have any adverse affects to any wildlife or aquatic life in the area. There will be only a minor effect on the surface cover. Drilling and production operations should have minimal effect on the population patterns, land use, public utilities or public services in the near future for this rural area.

Noise levels during drilling and completion operations may be continuous but not unusually high. If production is achieved, noise levels should be minimal during the operation and maintenance of the wells. Necessary soil erosion and sedimentation safeguards will be built into the well pad, access and future proposed pipeline routes to protect any nearby lowlands, where appropriate. Particular care will be exercised in order that all drain ditches be maintained and kept unobstructed to prevent water backup against spoil banks or backfill, causing erosion. The cumulative long-term effect on the immediate environment should be minimal.

If the well is productive, the effect on the air quality in the area is expected to be practically non-existent. Human activity in this area is somewhat limited, due to the nature of the location. Ranching operations and any activities in the area should not be adversely affected.

The site will then be contoured as closely as practical to its natural state, fine graded and stabilized. The well site and access route will be restored as soon as practical. If a well is productive, existing dikes will be maintained and erosion control procedures, as specified and required by the Bureau of Land Management, will be followed to insure protection of the local ecosystem.

#### Cultural

A Class III cultural resource evaluation has been ordered by Wolverine and will supplement this application package as soon as weather and surface conditions permit the survey and its resulting report. This supplement shall be considered "Attachment G."

#### Wildlife

Please see "Attachment D", a summary of Wildlife and Vegetative Species of Concern.

### **H2S Contingency Plan**

Please see "Attachment E", H2S Contingency Plan.

Project Plan of Development & Surface Use Plan Wolverine Gas and Oil of \_ah, LLC Wolverine Federal #17-2

# CONFIDENTIAL

### XIV. SUMMARY:

In conclusion, the environmental impact of this project is considered to be minimal and every effort will be made to ensure the protection and preservation of the environment, as well as the standard of living for those affected by its operation.

This proposed project is aimed at increasing the hydrocarbon reserves within the State of Utah. In addition, in the event that production can be established in this project, it will be of financial benefit to the private holders of oil and gas rights within the "Wolverine Federal Exploration Unit", including the Bureau of Land Management in fulfillment of its stewardship responsibilities over federally owned oil and gas assets. We consider the environmental impact of this project to be slight and we will make every effort to be conscientious operators and to insure protection and preservation of the environment during the course of our drilling and producing operations.

Sincerely,

Wolverine Gds and Oil Company of Utah, LLC

By:

**Authorized Permitting Agent:** 

Western Land Services – Western Division 54 West Seymour Street Sheridan, WY 82801 Donald L. Anderson, Chief Operating Officer

Phone: 307-673-1817

Local Contact: Shawn Burd Cellular Phone: 307-751-5156

## H₂S Contingency Plan

for

Wolverine Federal #17-2

Township 23S, Range 1W

Section 17

Sevier County, Utah

Wolverine Gas & Oil of Utah, LLC One Riverfront Flaza 55 Campau NW Grand Rapids, MI 49503

## Table of Contents

	<u>Page</u>
Introduction and directions	3
I. Responsibilities and Duties	4
A. All personnel	4
B. Drilling Foreman	5
C. Rig Supervisor – Toolpusher	6
D. Safety Consultant	6
II. Drilling Rig Layout	7
A. Location	7
III. Safety Procedures	9
A. Training	9
B. Operating Conditions	10
C. Evacuation Plan	10
D. Emergency Rescue Procedures	11
IV. H₂S Safety Equipment on Drilling Location	12
A. Map of Showing Location of H <sub>2</sub> S Equip.	14
V. Well Ignition Procedures	15
A. Ignition Equipment	15
B. Ignition Procedures	15
VI. Residents - Public in Radius of Exposure	16
A. Map of Area Around Location	17
B. Map of Escape Route	18
VII. Emergency Phone Directory	19
A. Wolverine Gas & Oil Of Utah, LLC	19
B. Emergency Services Phone List	19
VIII. Properties of Gas	20
A. Hydrogen Sulfide	21
R Sulfur Dioxide	25

#### Introduction

It is the policy of Wolverine Gas & Oil of Utah, LLC to provide a safe and healthful work environment for all of its employees as well as contractors that may work on Wolverine Leases. Wolverine Gas & Oil of Utah, LLC makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H<sub>2</sub>S contingency plan for the 'Wolverine Federal #17-2 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the wellsite in the event of a sudden release of hydrogen sulfide. All personnel working on the wellsite as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling operation is necessary for this plan to be effective.

### I. Responsibilities and Duties

In order to assure proper execution of the contingency plan, it is essential that one person be responsible for and in complete charge of implementing the procedures outlined in this plan. The order of Responsibility will be as follows:

- 1. Wolverine Gas & Oil Of Utah, LLC drilling representative on location if unable to perform his / her duties
- 2. Alternate Wolverine Gas & Oil Of Utah, LLC representative if unable to perform his / her duties
- 3. Rig Toolpusher / Supervisor if unable to perform his / her duties
- 4. Safety consultant representative if available

#### A. All Personnel

- 1. Always be alert for possible H<sub>2</sub>S alarms both audible and visual.
- 2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.
- 3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.
- 4. Familiarize yourself with nearest escape routes for safe evacuation
- 5. Should H₂S alarms sound, DON'T PANIC Remain calm and follow instructions of person in charge.
- 6. If the H<sub>2</sub>S alarms sound:
  - a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H<sub>2</sub>S concentration less than 10 PPM)
  - b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape breathing systems. Wait there for further instructions form Wolverine drilling representative.

c. Initiate rescue protocol if necessary - following training procedures.

### **B.** Drilling Foreman

- 1. The Wolverine drilling foreman will confirm that all personnel on location are trained in H<sub>2</sub>S safety and aware of above list of duties when the H<sub>2</sub>S plan becomes effective at drill out of intermediate casing shoe above the Navajo Formation.
- 2. The Wolverine foreman will ensure that all safety and emergency procedures are observed by all personnel.
- 3. The Wolverine foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.
- 4. Should any extreme danger condition exist, the Wolverine foreman will:
  - a. Assess the situation and advise all personnel by appropriate means of communication.
  - b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.
  - c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.
  - d. Notify company and regulatory groups of current situation as outlined in company protocol.
  - e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H₂S hazard.
  - f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
  - g. Be responsible for authorizing evacuation of persons / residents in area surrounding the drilling location.
  - h. Commence any ignition procedures if ignition criteria are met.

## C. Rig Supervisor - Toolpusher

- 1. If the Wolverine drilling foreman is unable to perform his / her duties, and the alternate drilling foreman is also unable or unavailable to perform his / her duties, the drilling rig Toolpusher will assume command of wellsite operations and all responsibilities listed above for drilling foreman.
- 2. Ensure that all rig personnel are properly trained to work in H<sub>2</sub>S environment and fully understand purpose of H<sub>2</sub>S alarms and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas, and individual duties as well as emergency evacuation procedures.
- 3. Should an extreme danger operational condition arise, the rig Toolpusher shall assist the Wolverine foreman by:
  - a. Proceeding to the rig floor and assist in supervising rig operations.
  - b. Ensure that only essential working personnel remain in hazardous areas.
  - c. Ensure that all crew members that remain in hazardous area wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
  - d. Assign rig crew member or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
  - e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.

## D. Safety Consultant

- 1. During normal operations (no H<sub>2</sub>S present), the safety consultant will be responsible for the following:
  - a. Ensure that all wellsite safety equipment is in place and operational.

- b. Ensure that all wellsite personnel are familiar with location safety layout and operation of all safety equipment.
- c. Assist the Wolverine foreman in performing weekly H<sub>2</sub>S drills for location personnel.
- When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:
  - a. Account for all wellsite personnel
  - b. Assess any injuries and direct first aid measure.
  - c. Ensure that all safety and monitoring equipment is functioning properly and available.
  - d. Monitor the safety of wellsite personnel
  - e. Maintain a close communication with Wolverine foreman.
  - f. Be prepared to assist Wolverine foreman with support for rig crew or other personnel using breathing equipment.
  - g. Be prepared to assist Wolverine foreman with emergency procedures including possible well ignition.
  - h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

## II. Drilling Rig Layout

#### A. Location

- 1. All respiratory protective equipment and H<sub>2</sub>S detection equipment will be rigged up prior to drilling out intermediate casing and entering the first zone suspected to contain hydrogen sulfide. The rig crews and other service personnel will be trained at this time.
- 2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the BOP to the circulation tanks.
- 3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route

- will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.
- 4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated briefing area for instructions.
- 5. Smoking areas will be established and "No Smoking" signs will be posted around the location.
- 6. Reliable 24 hour radio and telephone communications will be available at the drilling foremen's office.
- 7. A mud-gas separator will be rigged up and manifolded to the choke system.
- 8. All equipment that might come into contact with hydrogen sulfide drill pipe, drill stem test tools, blowout preventers, casing, and choke system will meet Wolverine's metallurgy requirements for H<sub>2</sub>S service.
- 9. The drilling rig will have a continuous electronic H<sub>2</sub>S detection system that automatically will activate visible and audible alarms if hydrogen sulfide is detected. The visible light will activate if 10 PPM H<sub>2</sub>S is present. The audible siren will activate if 15 PPM or higher concentration is present. There will be at least 4 H<sub>2</sub>S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.
- 10. The H₂S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.
- 11. At least 4 windsocks will be placed around the drill site to ensure that everyone on the drilling location can readily determine wind direction.

One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

- 12. All respiratory protective equipment will be NIOSH/MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air. Battery powered voice mikes will be available for communication when wearing masks.
- 13. Both 30 minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All Respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32 F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.
- 14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.
- 15. H<sub>2</sub>S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log.

## Safety Procedures

### A. Training

All personnel who come onto the drilling location must be properly trained in hydrogen sulfide, nitrogen, and oxygen deficient atmospheres safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months.

Training topics shall include at a mirimum:

- Hazards and characteristics of hydrogen sulfide, nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.
- 2. Proper use, care and limitations of respiratory protective equipment with hands on practice.
- 3. Use of both fixed and portable toxic gas detection equipment.

- 4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.
- 5. First aid for toxic gas exposure and resuscitation equipment.
- 6. The buddy system
- 7. Emergency evacuation procedures
- 8. A review of the contingency plan for the well.

### **B.** Operating Conditions

A three color flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the wellsite. This system is in compliance with BLM O.O. #6 and follows industry standards.

Green Flag - Potential Danger

Yellow Flag - Moderate Danger

Red Flag - Extreme Danger - Do Not approach if red flag is flying.

#### C. Evacuation Plan

There are three residential locations within a one mile radius of the well site. Ron Dastrup lives approximately 3/4 mile northwest of the well location. Mack Dastrup lives approximately one mile southeast of the well location. Kenneth Dastrup also lives approximately one mile southeast of the well location. In the event of an emergency requiring evacuation, the Dastrups would be notified by Wolverine's drilling foreman and given specific directions as to how to evacuate, with due consideration to the wind at the time and other factors. Should a telephonic notification to Mr. Dastrup not be successful in reaching him, one of the non-critical rig personnel will be sent to his home to insure he can be evacuated to safety. The Dastrup's contact information is:

Ron and Virginia Dastrup P.O. Box 57011 Sigurd, UT 84657 (435) 896-7259 Mack Dastrup 600 King's Meadow Sigurd, UT 84657 (435) 896-5206

Kenneth Dastrup 500 North King's Meadow Sigurd, UT 84657 (435) 896-8759

#### D. Emergency Rescue Procedures

Wellsite personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide should **not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

- 1. Don rescue breathing equipment before attempting to rescue someone.
- 2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.
- 3. If the victim is not breathing, initiate mouth to mouth resuscitation immediately. Follow CPR guidelines and replace mouth to mouth with a bag mask resuscitator if available.
- 4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.
- 5. Any personnel who experience hydrogen sulfide exposure must be taken to a hospital for examination and their supervisor notified of the incident.
- 6. Their supervisor shall follow the company Emergency Preparedness plan.

## IV. H₂S Safety Equipment on Drilling Location

ltem	Amount	Description
1.	One (1)	safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high pressure regulators
2.	At least 1000 ft.	low pressure airline equipped with Hansen locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self contained breathing apparatuses (SCBA)
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4 - channel continuous electronic H₂S monitor with audible and visual alarms. The set points for these alarms are 10 PPM for the low alarm and 15 PPM for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	trauma first aid kit
9.	One (1)	stokes stretcher and one (1) KED.
10.	Four (4)	wind socks
11.	At least one (1)	well condition sign with 3 flag system
12.	Two (2)	Safe Briefing Area (SBA) signs
13.	One (1)	fire blanket

14.	One (1)	set air splints
<b>15</b> .	Two (2)	electric explosion proof fans
16.	One (1)	bullhorn and chalk board
17.	Three (3)	300 cu. ft. air bottles for the safe briefing area.
18.	Two (2)	30 # fire extinguishers
19.	Six (6)	battery powered voice mikes for communication when wearing air masks.
20.	One (1)	battery powered combustible gas meter

Elen Graded Ground at Location Stake - 5722.4'

#### V. Well Ignition Procedures

If it should become apparent that an uncontrolled release of hydrogen sulfide to the atmosphere may endanger the health and safety of the public or well site personnel, the Wolverine drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

- **A. Ignition Equipment** the following equipment will be available on-site for use by the ignition team.
  - 1. 2 12-gauge flare guns with flare shells
  - 2. 2 500 ft. fire resistant retrieval ropes
  - 3. 1 portable combustible gas meter
  - 4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
  - 5. 1 backup vehicle with communications equipment

#### **B.** Ignition Procedures

- 1. The Wolverine drilling foreman will ensure that well site personnel are evacuated to a safe area upwind of the well bore prior to any ignition action.
- 2. The Wolverine foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.
- 3. The backup crew will be positioned near a radio equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.
- 4. The partner of the ignition team will carry a combustible gas / hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.
- 5. The Wolverine foreman will carry the flare gun and shells.

- 6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 degree angles to the gas source, but DO NOT approach closer to the leak.
- 7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

#### VI. Residents - Public in Fladius of Exposure

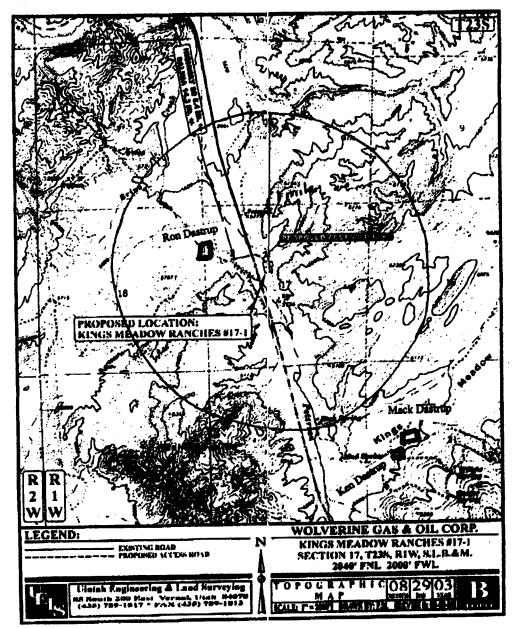
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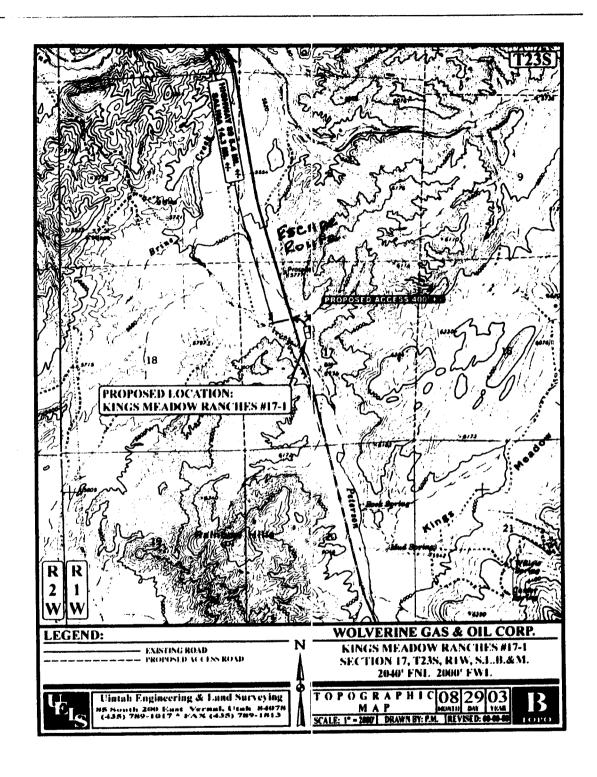
Mack Dastrup 600 King's Meadow Sigurd, UT 84657 (435) 896-5206

Kenneth Dastrup 500 North King's Meadow Sigurd, UT 84657 (435) 896-8759

Wolverine Gas & Oil of Utah, LLC operates one other well within a one mile radius; the Kings Meadow Ranches #17-1, situated in the SE/NW of Section 17, Township 23 South – Range 10 West.



TOTAL P.01



# VII. Emergency Phone Directory

A. Wolverine Gas & Oil Of Utah, LLC One Riverfront Plaza 55 Campau NW Grand Rapids, MI 49503-2616 616-458-1150

Title	Name	<u>Phone</u>
Wolverine Gas and Oil of Utah Drilling Supervisor	Pat Clark.	M (307) 259-6261
Unit Drilling Drilling Superintendent	To be determined	
Wolverine Gas and Oil of Utah Manager of Engineering	Tim Brock	O (517) 676-7023 M (517) 242-6588
B. Emergency Services Phon	e List	
Sevier Valley Medical	Center - Richfield, UT	435-896-8271
2. Ambulance Services -	Sevier County, UT	911
3. Sheriff Department - S	Sevier County, UT	435-896-2600
4. Highway Patrol - Utah	1	800-222-0038
5. Fire Department - Ric		
6. Utah Division Oil & G	as - Salt Lake City, UT	801-538-5277
	Air Med- Salt Lake City, U	

#### VIII. Properties of Gas

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

#### **TOXICITY OF VARIOUS GASES**

Common Name	Chemical Formula	Specific Gravity (Air = 1)	1 Threshold <u>Limit</u>	2 Hazardous Limit	3 Lethal Concern
Hydrogen Sulfide	H₂S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21	5 ppm	-	1000 ppm
Carbon Monoxide	СО	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO <sub>2</sub>	1.52	50()0 ppm	5%	10%
Methane	CH₄	0.55	90()00 ppm	Combustible above 5% in Air	••

- 1. Threshold Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.
- 2. Hazardous Concentration that may cause death.
- 3. Lethal Concentration that will cause death with short-term exposure

#### A. Hydrogen Sulfide

#### **General Properties**

Hydrogen Sulfide itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H<sub>2</sub>S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide, which is more toxic than Carbon Monoxide.

Common names: sour gas, acid gas, rotten egg gas, sulphur gas, sulphurated gas, sweet gas (H<sub>2</sub>S is a sweet tasting gas, but often the word "tasting" is left out).

#### **Physical - Chemical Properties**

Chemical Formula	H <sub>2</sub> S
1. Specific Gravity (air = 1.000)	1.193 (@ 77 F)
2. Color	None
3. Odor	Compare to rotten eggs
4. Odor Threshold	0.13 part of 1 ppm
5. Corrosivity	Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water	4.0 to 1 in H₂O @ 32 F 2.6 to 1 in H₂O @ 68 F
7. Effects on Humans	Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure	19.6 atmospheres at 25 C

#### Industrial Occurrences

Hydrogen Sulfide exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, tanneries, and in the manufacture of some chemicals, dyes and pigments. It may be encountered in excavations in swampy or filled ground. It is produced when sulfur-containing organic matter decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manholes, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

#### **Toxic Properties**

Hydrogen Sulfide is an extremely toxic and irritating gas. Free Hydrogen Sulfide in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations cause blocking of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about three days, have occurred after acute exposures to Hydrogen Sulfide.

At low concentrations the predominant effect of Hydrogen Sulfide is on the eyes and respiratory tract. Eye irritation, conjunctivitis, pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide do not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor, some victims of sudden acute overexposure have reported a brief, sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide have been summarized as follows:

0.2 ppm	. No odor
0.13 ppm	.Minimal perceptible odor
0.77 ppm	.Faint, but readily perceptible odor
4.60 ppm	.Easily detectable, moderate odor
27.0 ppm	. Strong, unpleasant odor, but not intolerable

Physiological responses to various concentrations of Hydrogen Sulfide have been reported as follows:

10 ppm	Begirining eye irritation
50-100 ppm	. Slight conjunctivitis and respiratory tract irritation after 1 hour exposure.

100 ppm	Coughing, eye irritation, loss of sense of smell after 2-15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15-30 minutes, followed by throat irritation after 1 hour. Several hours' exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
200-300 ppm	. Marked conjunctivitis and respiratory tract irritation after 1 hour of exposure.
500-700 ppm	Loss of consciousness and possibility of death in 30 minutes to 1 hour.
700-1000 ppm	Rapid unconsciousness, cessation of respiration, and death.
1000-2000 ppm	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

#### **Acceptable Concentrations**

#### Acceptable Eight-Hour Time-Weighted Average

To avoid discomfort, the time-weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

#### Acceptable Ceiling Concentrations

The acceptable concentration for protection of health for an eighthour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

# Acceptable Maximum for Peaks Above Acceptable Base Line for Continuous Exposure

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

#### H<sub>2</sub>S Equivalents

Parts per	December	Grains per
Million	<u>Percents</u>	100 cu. ft.
1	.0001	.055
10	.001	.55
18	.0018	1.0
100	.01	5.5
1000	.1	5.55
10000	1.0	555.5

Grains per 100 cu. ft. = % by volume Mole 636.4 1% by volume = 10,000 ppm

#### **B. Sulfur Dioxide**

Sulfur Dioxide (S0<sub>2</sub>) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide is produced during the burning of  $H_2S$ . Although  $SO_2$  is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

### **Physical - Chemical Properties**

Chemical Formula	SC <sub>2</sub>
1. Specific Gravity (air = 1.000)	2.212
2. Color	. Nane
3. Flammable	. No
4. Odor	. Characteristic, pungent, gives ample warning of its presence.
5. Corrosivity	. Dry – not corrosive to ordinary metals Wet – corrosive to most common metals
6. Allowable Concentrations	. 5 ppm (ACGIH) 5 ppm (OSHA)

7. Effects on Humans ....... Irritates eyes, throat and upper respiratory system

#### **Concentrations & Effects**

%SO <sub>2</sub>	ppm	Effects
.0005	5	Pungent odor-normally a person can detect SO <sub>2</sub> in this range.
.001	10	Safe for eight (8) hour exposure.
.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, even with the first breath.

#### **Toxic Properties**

Sulfur Dioxide is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide contaminated atmosphere unless he were unconscious or trapped.

Sulfur Dioxide gas is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is so extremely irritating that it can be enclured only for a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide, there are few references that would indicate pneumonia as an after effect.



#### Wildlife and Vegetative Species of Concern

#### Wolverine Federal #17-2

The Wolverine Federal #17-2 wellsite is located approximately 4.2 miles southeast of the town of Sigurd in Township 23 South - Range 1 Wes:, Section 17: Southeast Quarter of the Southwest Quarter (SE/SW), Salt Lake Base and Meridian in Sevier County, Utah.

The proposed Wolverine Federal #17-2 is situated ad acent to Highway 24 in a gentle rolling plains with hilly terrain on the west side. Plant habitat types within the area consist of a combination of Pinyon Pine—Juniper, located on the hillsides, and sagebrush—grass communities in the less gradient areas.

#### THE PROPOSED ACTIONS

The proposed depth is 9,100 feet for the Wolverine Federal #17-2 well. The well pad dimensions will be approximately 300 feet by 430 feet. The access road will be constructed by initially using fill material and covering it with approximately 8 inches of shale/gravel. Another layer of road base material, approximately 4 inches in depth, will be placed on top of the shale/gravel.

#### WILDLIFE AND VEGETATIVE SPECIES OF CONCERN

Potential effects concerning federally endangered, threatened, proposed, candidate, sensitive, and management indicator wildlife and vegetative species will be evaluated in the proposed area of disturbance before any surface disturbing activities occur. It is understood that these activities and the proposed location will be evaluated by a BLM staff or approved biologist. A habitat analysis will be done to evaluate which species may occur in the area. Surface use guidelines will be followed as will surface use restrictions and time limit stipulations in the areas of concern for all affected species.

It is understood that the Wolverine Federal #17-2 we lsite is situated within a designated critical deer wintering range. Proposed activities are not anticipated to occur during any such wintering range seasonal restrictions. There is also the possibility that small clumps of Penstemon plants may be located within this project area. Wolverine Gas and Oil Company of Utah, LLC will take all necessary steps to protect the species of concern and as stipulated by the Bureau of Land Management.

#### **BOND STATEMENT**

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Wolverine Gas and Oil Company of Utah, LLC with their Bond, filed with Bureau of Land Management in the amount of \$150,000.

The Bond Number is WY3329

#### **OPERATOR'S REPRESENTATIVE AND CERTIFICATIONS**

The responsible field representative for the Wolverine Federal #17-1, on behalf of Wolverine Gas and Oil Company of Utah, LLC, is Timothy J. Brock, P.E. and is available via Wolverine Gas and Oil Company of Utah, LLC, One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI 49503. (616) 458-1150.

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route; that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Wolverine Gas and Oil Company of Utah, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date:

March 9, 2004

Name and Title:

Richard Moritz, Vice-President, Land and Legal

#### **OPERATOR RIDER**

This rider is being submitted to comply with 43 CFR 3104.2 which states "... The operator on the ground shall be covered by a bond in his/her own name as principal, or a bond in the name of the lessee or sublessee, provided that a consent of the surety, or the obligor in the case of a personal bond, to include the operator under the coverage of the bond is furnished to the Bureau office maintaining the bond."

The obligor hereby agrees to extend the coverage of their bond to include liabilities for operations conducted by <u>Wolverine Gas and Oil Company of Utah, LLC</u> and <u>Wolverine Gas and Oil Company of Wyoming, LLC</u> on Federal oil and gas leases.

Coverage includes the performance of all lease obligations, both past and future, including the responsibility to properly plug and abandon any and all wells, including related surface restoration, and to pay any outstanding rentals or royalties due.

This coverage of operations shall continue whether or not the lease subsequently expires, terminates, is canceled, or relinquished; provided, however, that this rider shall not act to increase the actual cumulative or potential liability of the obligor above the face amount of the bond.

Executed this 3rd day of March, 2004.

Witness:

One Riverfront Plaza. 55 Campau NW

Grand Rapids, MJ 49503-2616

Address of witness

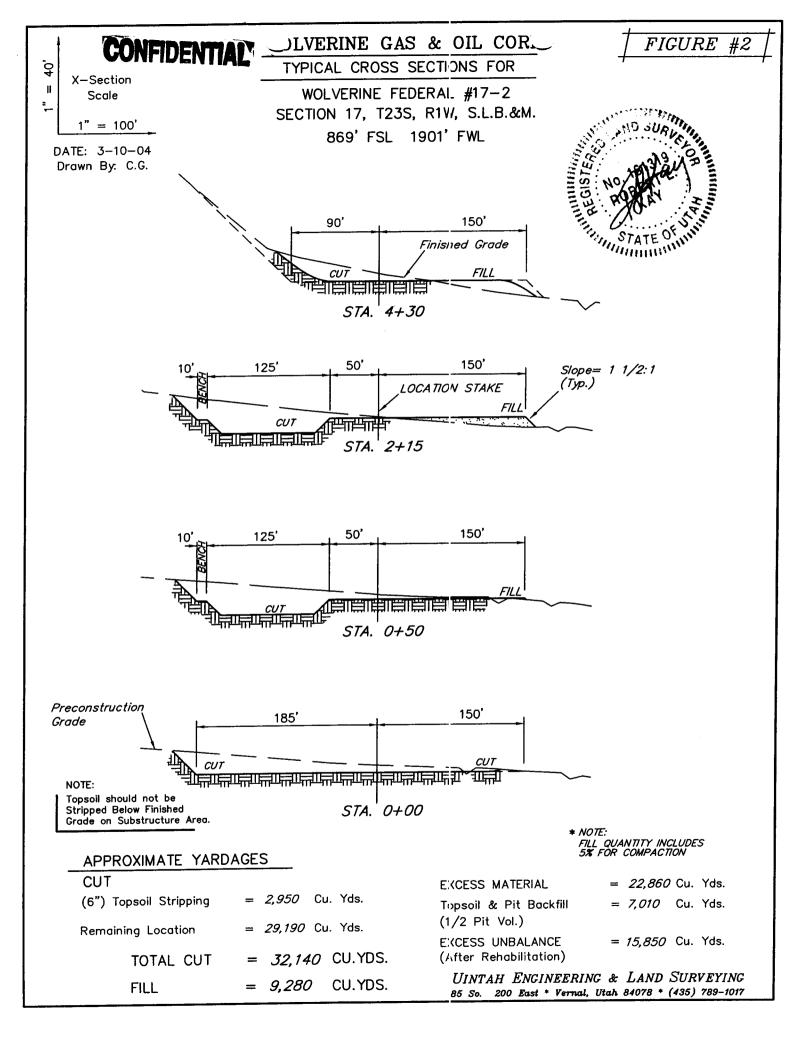
Wolverine Gas and Oil Corporation

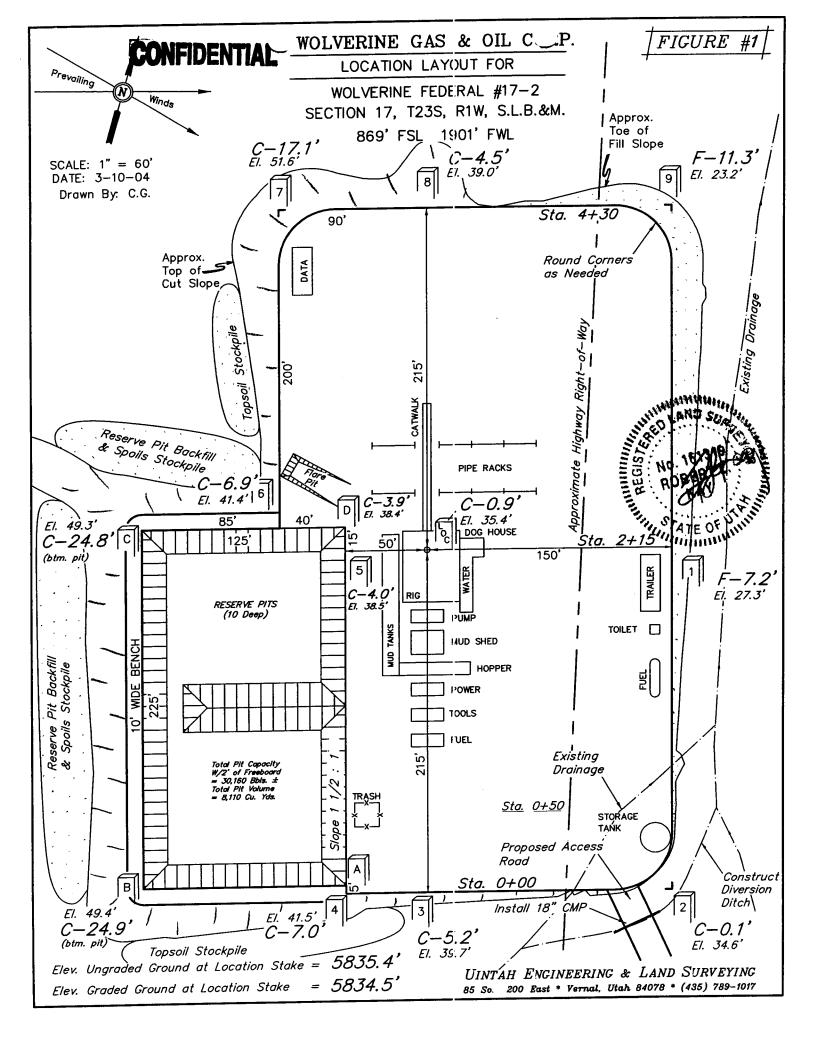
Obligor

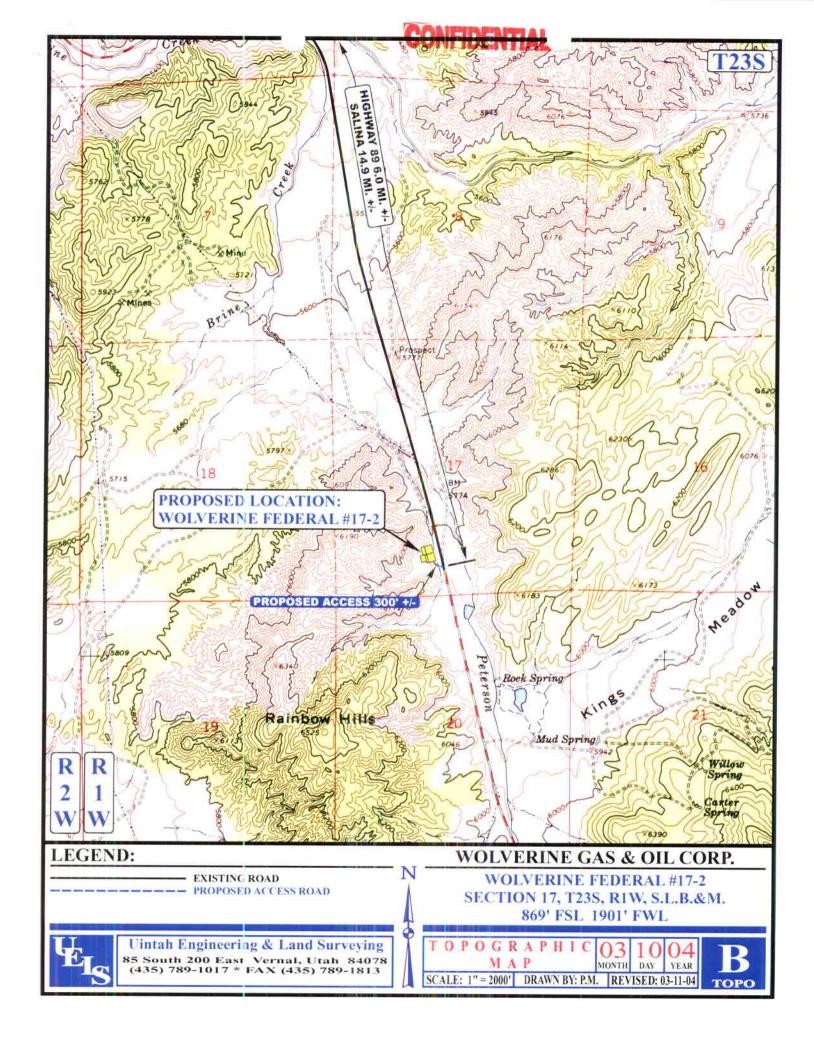
For Obligor: Gary R. Bleeker

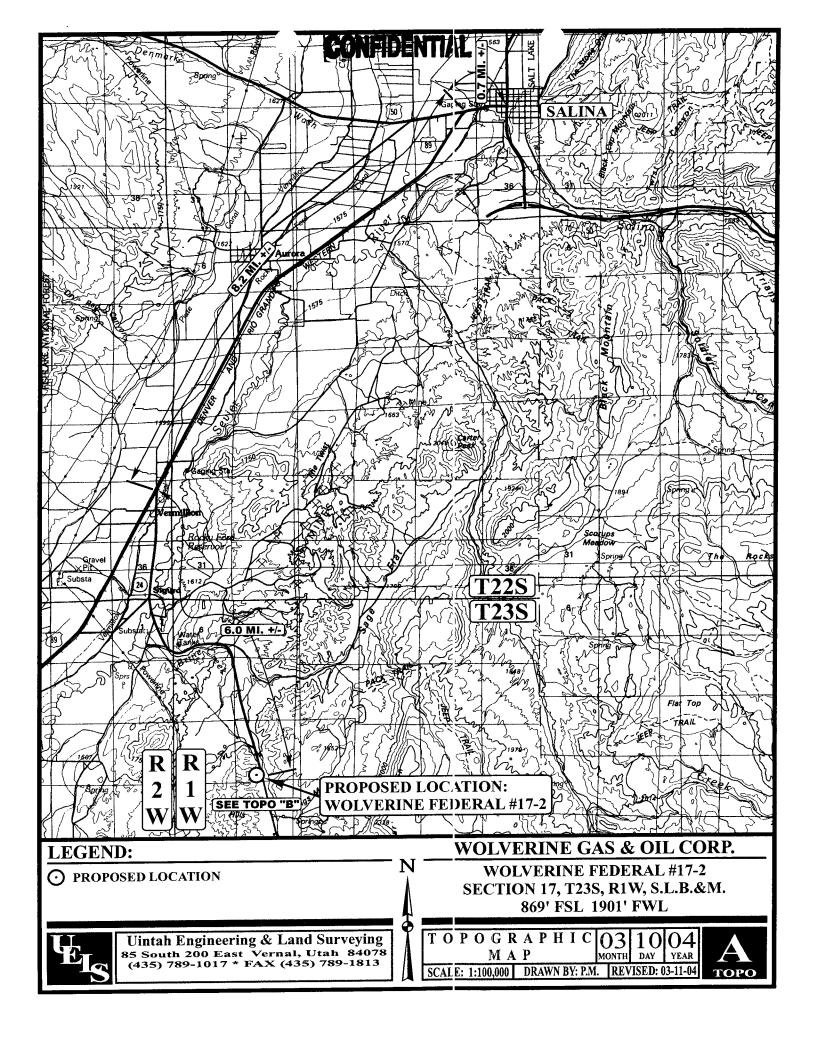
Vice President and COO

One Riverfront Plaza, 55 Campau NW Grand Rapids, MI 49503-2616
Obligor's address











# WOLVERINE GAS & OIL CORP.

## **WOLVERINE FEDERAL #17-2**

LOCATED IN SEVIER COUNTY, UTAH SECTION 17, T23S, R1W, S.L.B.&M.

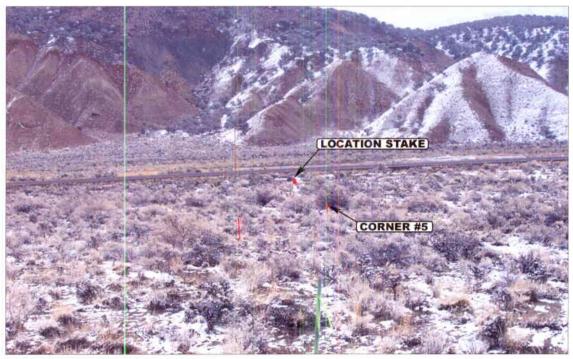


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

**CAMERA ANGLE: NORTHEASTERLY** 



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

**CAMERA ANGLE: NORTHWESTERLY** 



LOCATION	PHOTOS	O.	3 TH	10 DAY	04 YEAR	РНОТО
TAKEN BY: G.O.	DRAWN BY: P.N	A. R	EVI	SED: 0	3-11-04	

#### APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 03/16/2004	API NO. ASSIGN	ED: 43-041-3003	31
WELL NAME: WOLVERINE FED 17-2  OPERATOR: WOLVERINE GAS & OIL CO ( N1655 )  CONTACT: RICHARD MORITZ	PHONE NUMBER: 6:	L6-458-1150	
PROPOSED LOCATION:	INSPECT LOCATN	BY: / /	
SESW 17 230S 010W SURFACE: 0869 FSL 1901 FWL	Tech Review	Initials	Date
BOTTOM: 0869 FSL 1901 FWL SEVIER	Engineering		
UNDESIGNATED ( 2 )	Geology		
LEASE TYPE: 1 - Federal LEASE NUMBER: UTU-73528	Surface		
SURFACE OWNER: 1 - Federal PROPOSED FORMATION: NAVA COALBED METHANE WELL? NO	LONGITUDE: 38.7		
RECEIVED AND/OR REVIEWED:  Plat Bond: Fed[1] Ind[] Sta[] Fee[]  (No. WY 3329 )  N Potash (Y/N)  Oil Shale 190-5 (E) or 190-3 or 190-13  Water Permit  (No. 133530 )  RDCC Review (Y/N)  (Date: )  NA Fee Surf Agreement (Y/N)	R649-3-3. E Drilling Uni Board Cause Eff Date: Siting:	General  rom Qtr/Qtr & 920'  Exception  t  No:	
COMMENTS:			
stipulations: 1- Eden Opport	av s (O		

T23S RIW		
1255 KIW		
7	8	
		9
	WOLVERINE UNIT	
	VV JAV BILLIUS STATE	
	KINGS MEADOW RANCHES 17-1	
18	17	16
	WOLVERINE FED 17-2	
19	20	21
OPERATOR: WOLVERINE G&O CO (N1655)		
SEC. 17 T.23S, R.1W		
FIELD: WILDCAT (001)		W * ~ ~ ~
COUNTY: SEVIER	`	NK Y
SPACING: R649-3-3 / EXCEPTION LOCATION	-	-
51 ACING, ROTS/3/3/ EACE! HON LOCATION		
Well Status	Ut	cah Oil Gas and Mining
GAS INJECTION GAS STORAGE Unit Status	3	
× LOCATION ABANDONED	EXPLORATORY	N
	GAS STORAGE NF PP OIL	A
	NF SECONDARY Field Status	
[	PENDING	VV
CITIET IN OU	PLOIL	× 1
Y TEMP ARANDONED	PP GAS COMBIN	T .
o TEST WELL	PP GEOTHERML INACTIVE PROPOSE	3
△ WATER INJECTION	SECONDARY STORAG	FREPARED BY: DIANA WHITNEY
• WATER SUPPLY	TERMINATED TERMIN	DATE 19 MADCH 2004
TITLE DIGI COIL		

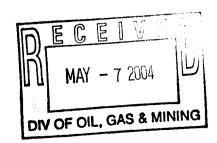
Form 3160-3 (September 2001)

UNITED STATES

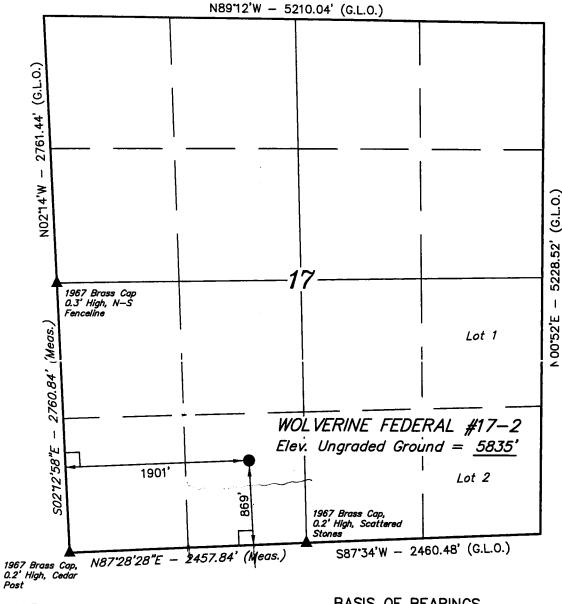
FORM APPROVED OMB No. 1004-0136 Expires January 31, 2004

DEPARTMENT OF THE INTERIOR				UTU-73528	
BUREAU OF LAND MANAGEMENT  APPLICATION FOR PERMIT TO DRILL OR REENTER				6. If Indian, Allotee or Tribe Name	
la. Type of work: DRILL REENTER			7 If Unit or CA Agreement, Name and No. Wolverine Fed. Exploration Unit		
lb. Type of Well: Oil Well Gas Well Other	Single	e Zone Multipl	e Zone	8. Lease Name and Well N Wolverine Federal	
2. Name of Operator Welverine Gas and Oil Company of Uta				9. API Well No. 43 OAL 30	031
3a. Address One Riverfront Plaza, 55 Campau NW Grand Rapids, MI 49503-2616	3b. Phone No. (include a ea code) 616-458-1150			10. Field and Pool, or Exploratory  Exploratory	
4. Location of Well (Report location clearly and in accordance with any At surface SE/SW 869 FSL		)l' FWL		11. Sec., T. R. M. or Blk. and SESW, Section 17,	
At proposed prod. zone SAME 418899 7  14. Distance in miles and direction from nearest town or post office*  5.9 miles South of Sigurd, Utah	-111, 9	13390		12. County or Parish Sevier	13. State UT
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of acr	es in leas a		g Unit dedicated to this well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed I	0 '	WY 3		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)  5,834.5' - GL	22. Approxim	ate date vork will sta 05/25/2004	rt*	23. Estimated duration Drilling: 60 days	
	24. Attach		madad sa sh	ia frame	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>		4. Bond to cover the litera 20 above). 5. Operator certification. 6. Such other site.	the operation cation specific inf	ons unless covered by an exist formation and/or plans as may	
75 Simeture 1 1 1 1		au horized offi (Printed/Typed) Richard Moritz	cer.	Dat	°,05/06/04
Title  Vice-President, Land & Legal  Approved by Signature)  Approved by Signature  Approved by Signature  Approved by Signature  Approved by Signature	ary ary				
Approved by Signature:  Title  Vice-President, Land & Legal  Approved  Redefel Approved  Redefel Necess	Name B	(Printed Typed)			5-17-04
Title	1	RONNIENTAL			e the applicant to
Application approval does not warrant or certify that the applicant hol conduct operations thereon.  Conditions of approval, if any, are attached.					
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations a	crime for any p s to any matter w	erson knowingly and within its jurisdiction.	willfully to	make to any department or a	gency of the United

\*(Instructions on page 2)



## T23S, R1W, S.L.B.&M.



#### LEGEND:

= 90° SYMBOL

PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

#### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)

LATITUDE = 38.4751.45" (38.797625)

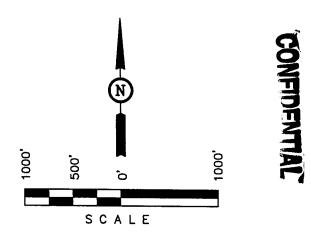
LONGITUDE = 111°56'05.38" (111.934828)

#### WOLVERINE GAS & OIL CORP.

Well location, WOLVERINE FEDERAL #17-2, located as shown in the SE 1/4 SW 1/4 of Section 17, T23S, R1W, S.L.B.&M., Sevier County, Utah.

#### BASIS OF ELEVATION

SPOT ELEVATION LOCATED NEAR A ROAD IN THE SW 1/4 OF SECTION 17, T23S, R1W, S.L.B.&M., TAKEN FROM THE SIGURD QUADRANGLE, UTAH, SEVIER COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5774 FEET.



#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY WAR OF WHOSE MY SUPERVISION AND THAT THE SAME ARE STRUE AND BEST OF MY KNOWLEDGE AND BELIE

#### UINTAH ENGINEERING 85 SOUTH 200 EAST -VERNAL, UTAH 84078 (435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 3-4-04	DATE DRAWN: 3-10-04	
G.O. D.J. C.G.	REFERENCES G.L.O. PLA	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE WOLVERINE GA	AS & OIL CORP.	



May 13, 2004

Utah Division of Oil, Gas & Mining 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil requests permission to dril the Wolverine Federal #17-2 well as an exception to Rule R649-3-3

#### Gentlemen:

Pursuant to Rule R649-3-3 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine Federal #17-2 well to a total depth of 6,650 feet. Wolverine is the only operator within a 460 foot radius.

The reason for the proposed exception is that the proposed Wolverine Federal #17-2 well is currently staked outside of the "window" due to topographic reasons. Drilling within the "window" would prove unsafe and not cost effective.

Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

Shawn Burd

**Authorized Agent** 

RECEIVED

MAY 1 3 2004

DIV. OF OIL, GAS & MINING

 $0 \ 0 \ 3$ 



# State of Utah DEPARTMENT OF NATURAL RESOURCES Division of Water Rights

ROBERT L. MORGAN Executive Director JERRY D. CLDS
State Engine 2r/Division Director

April 12, 2004

Kings Meadow Ranches C/O Mack Dastrup P.O. Box 570125 Sigurd, UT 84657

RE: TEMPORARY CHANGE APPLICATION t28851

#### Dear Sir:

The above numbered Temporary Change Application has been approved subject to prior rights and the following condition:

♦ The total amount of water diverted from Kings Meadow Creek will be limited to 14.0 acre-feet of water for uses associated with gas well drilling from May 30, 2004 to May 30, 2005. The historically irrigated Land totaling 4.667 acres will not be irrigated.

Copies are herewith returned to you for your records and future reference.

Sincerely

Kirk Forbush, P.E. Regional Engineer

for Jerry Olds, State Engineer

RECEIVED

MAY 1 3 2004

DIV. OF OIL, GAS & MINING

JO/KF/cr enclosure



# APPLICATION FOR TEMPORARY CHANGE OF WATER RIGHTS Fee Paids 75.00

CTATE OF TELATAPR 7. 2004 Receipt # 04-0/540

ī	STATE OF UTAHAR 7. 2004 Reactiful of the state of the sta
; ;	Roll #
	*WATER RIGHT NO. 63 2529 *APPLICATION NO. 1 28851
	and are proposed in length mose applicable.
1	
•	
	Name: Kings Meadow Ranches - Evan Dastrup  Address: P.O. Box 116
	Address: P.O. Box 116  City: Sigurd State: Utah Zip Code: 84657
	*PRIORITY OF CHANGE: 4/7/04 *FILING DATE: 4/7/04
	*HLING DATE: _4/7/04
	RIGHT EVIDENCED BY: A Portion 63-2529
	Prior Approved Temporary Change Applications for this right:
	**************************************
: .;:	HERETOFORE PROPERTY AND
\$ A)	QUANTITY OF WATER
is o	OUANTITY OF WATER: cfs and/or14ac-ft.
э (O	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek COUNTY. Sevier
э (O	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek COUNTY. Sevier
	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE_Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION:S 1,011', E 1,711' from NW corner of
• • •	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION:S 1,011', E 1,711' from NW corner of Section 28, T23S, RIW
	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION: S 1,011', E 1,711' from NW corner of Section 28, T23s, R1W
	OUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION: S 1,011', E 1,711' from NW corner of Section 28, T23S, RIW
	QUANTITY OF WATER:cfs and/or14ac-ft.  SOURCE.Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION: S 1,011', E 1,711' from NW corner of Section 28, T23S, R1W  Description of Diverting Works: Kings Meadow Creek
· · · · · · · · · · · · · · · · · · ·	OUANTITY OF WATER:
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	OUANTITY OF WATER:

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

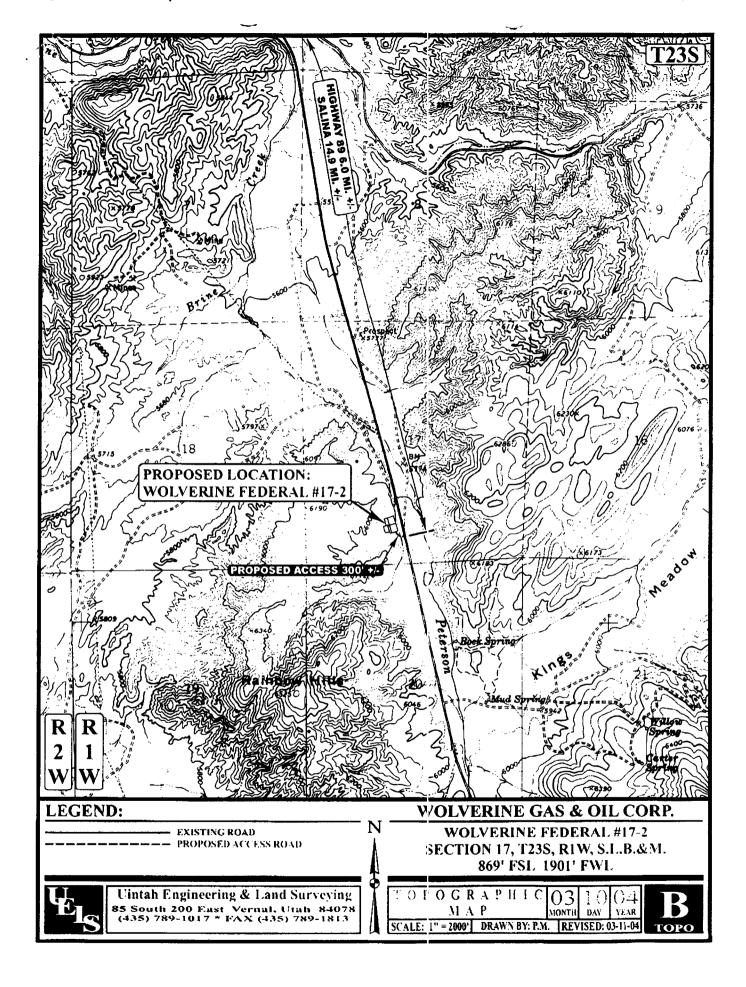
Signature of Applicant(s)

RECEIVED

MAY 1 3 2004

APPLICATION FOR TEMPORARY CHANGE

STATE OF UTAHAPR? 2004 Receips 24-01542    Charles   1	STATE OF UTAHAPR 7 2004 Receipt Conversely and the state of Utah, hereby made to the State Engineer, based upon the following showing of facts, submitted in according requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.  *WATER RIGHT NO. 63 2529 *APPLICATION NO. t 28851.  Changes are proposed in (check those applicable)	ds 75.00 1# 04-01540 ed 1# application is
STATE OF UTAHAPR 7 2004 Receipt a 247-01542  Norther purpose of obtaining permission to make a temporary change of water in the State of Utah, application is nequirements of Section 73-5 Utah Code Annotated 1953, as amended.  **WATER RIGHT NO. 63 2529 **APPLICATION NO. 28851.**  Changes are proposed in (check those applicable) **X** point of diversion. **X** place of use. **X** period of use. **X** period of use. **X** period of use. **X** period of use. **X** point of diversion. **X** place of use. **X** period of use. **X** pe	STATE OF UTAHAPR 7 2004 Receipt  STATE OF UTAHAPR 7 2004 Receipt  Roll  For the purpose of obtaining permission to make a temporary change of water in the State of Utah, hereby made to the State Engineer, based upon the following showing of facts, submitted in accord requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.  *WATER RIGHT NO. 63 2529  *APPLICATION NO. t 28851.  Changes are proposed in (check those applicable)	# <u>04- 0/546</u> #  application is ance with the
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City: Sigurd State: Utah Zip Code: 84657  2. *PRIORITY OF CHANGE: 4/7/04 **ILING DATE: 4/7/04  3. RIGHT EVIDENCED BY: A Portion 63+2525  Prior Approved Temporary Change Applications for this right:  4. QUANTITY OF WATER: Cfs and/or 14 ac-ft.  SOURCE, Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION: \$ 1,011', E 1,711' from NW corner of Section 28, T23S, R1W  Description of Diverting Works: Kings Meadow Creek  POINT(S) OF REDIVERSION  The water has been rediverted from at a point:  Description of Diverting Works: Cfs or ac-ft. The amount of water consumed iscfs orac-ft. The amount of water returned to the natural stream/source at a point(s):	OWNER INFORMATION Place of use. X nature of use. X	_ period of uso
City: Sigurd  State: Utah Zip Code: 84657  PRIORITY OF CHANGE: 4/7/04  **FILING DATE: 4/7/04  **ILING DATE: 4/7/04  3. RIGHT EVIDENCED BY: A Portion 63/2525  Prior Approved Temporary Change Applications for this right:  OUANTITY OF WATER: Cfs and/or 14 ac-ft.  SOURCE, Kings Meadow Creek  COUNTY: Sevier  POINT(S) OF DIVERSION: \$ 1,011', E 1,711' from NW corner of Section 28, T23S, R1W  Description of Diverting Works: Kings Meadow Creek  POINT(S) OF REDIVERSION  The water has been rediverted from at a point:  Description of Diverting Works: Cfs or ac-ft. The amount of water consumed iscfs orac-ft. The water has been returned to the natural stream/source at a point(s):	Name: Kings Meadow Ranches - Evan Dastrup	
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the water has been returned to the natural stream/source at a point(s):	The amount of water returned iscfs orcet.	
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	and the data stream/source at a point(s):	



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## **United States Department of the Interior**

#### **BUREAU OF LAND MANAGEMENT**

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

April 1, 2004

Memorandum

To:

Field Office Manger, Richfield Field Office

From:

Michael Coulthard, Petroleum Engineer

Subject:

2004 Plan of Development Wolverine Unit

Sevier County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2004 within the Wolverine Unit, Sevier County, Utah.

API#

WELL NAME

LOCATION

(Proposed PZ Navajo 2)

43-041-30031 Wolverine Fed 17-2 Sec 17 T23S R01W 0869 FSL 1901 FWL

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File - Wolverine Unit

Division of Oil Gas and Mining

Agr. Sec. Chron Fluid Chron

MCoulthard:mc:4-1-04



March 13, 2004

Utah Division of Oil, Gas & Mining C/o Diana Whitney 1594 West North Temple, Suite 1210 Salt Lake City, Utah 84114-5801

RE: Wolverine Federal #17-2 well located in T23S - R1W, Section 17: SE/SW, Sevier County, Utah

#### Dear Dianna:

I have enclosed a hard copy of the water permit and the exception location letter for the proposed Wolverine Federal #17-2 well.

Once again thanks for your help and patience with this matter and I look forward to working with you on future applications. Please feel free to call me at (435) 896-1943 office or (307) 751-0330 cell, should you have any further questions. Thank you for your time Dianna.

Sincerely,

Shawn Burd

Authorized Agent for Wolverine Gas and Oil Company of Utah, LLC



May 13, 2004

Utah Division of Oil, Gas & Mining 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil requests permission to drill the Wolverine Federal #17-2 well as an exception to Rule R649-3-3

#### Gentlemen:

Pursuant to Rule R649-3-3 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine Federal #17-2 well to a total depth of 6,650 feet. Wolverine is the only operator within a 460 foot radius.

The reason for the proposed exception is that the proposed Wolverine Federal #17-2 well is currently staked outside of the "window" due to topographic reasons. Drilling within the "window" would prove unsafe and not cost effective.

Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

Shawn Burd

**Authorized Agent** 

MAY 1 7 2004 DIV. OF OIL, GAS & M. C.



# -State of Utah. DEPARTMENT OF NATURAL RESOURCES Division of Water Rights

ROBERT L. MORGAN Executive Director JERRY D. OLDS
State Engineer/Division Director

April 12, 2004

Kings Meadow Ranches C/O Mack Dastrup P.O. Box 570125 Sigurd, UT 84657

RE: TEMPORARY CHANGE APPLICATION t.28851

Dear Sir:

The above numbered Temporary Change Application has been approved subject to prior rights and the following condition:

1111

↑ The total amount of water diverted from Kings Meadow Creek will be limited to 14.0 acre-feet of water for uses associated with gas well drilling from May 30, 2004 to May 30, 2005. The historically irrigated land totaling 4.667 acres will not be irrigated.

Copies are herewith returned to you for your records and future reference.

Sincerel

Kirk Forbush, P.E. Regional Engineer

for Jerry Olds, State Engineer

JO/KF/cr enclosure



# APPLICATION FOR TEMPORARY CHANGE

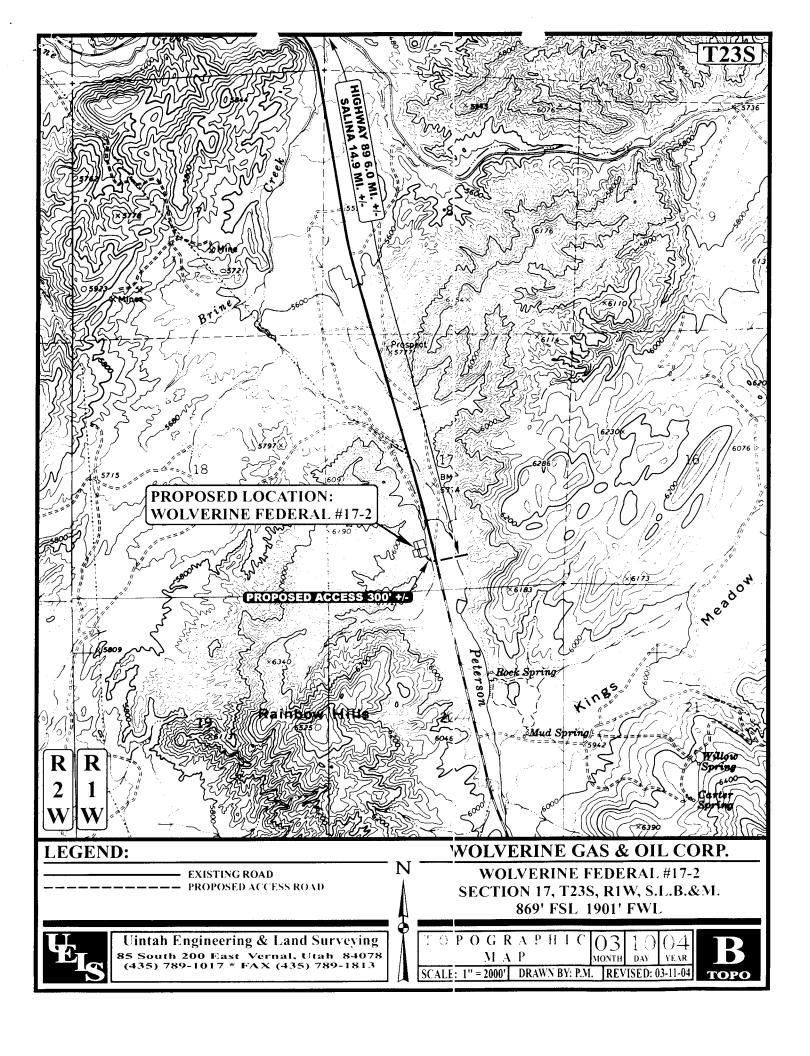
OF WATER RIGHTS FOR PAIR S 25:00

### STATE OF UTAHAPR 7 . 2004 Receipt # 04-01540 Microfilmed \_\_\_\_\_ RICHFIELD AREA For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended. 2529 \*APPLICATION NO. + 28851. \*WATER RIGHT NO. Changes are proposed in (check those applicable) point of diversion. X place of use. X nature of use. X period of use. 1. OWNER INFORMATION Name: Kings Meadow Ranches - Evan Dastrup \*Interest: \_\_\_\_\_% Address: P.O. Box 116 City: Sigurd State: Utah Zip Code: 84657 \*FILING DATE: \_4/7/04 \*PRIORITY OF CHANGE: \_\_\_4/7/04 3. RIGHT EVIDENCED BY: A Portion Prior Approved Temporary Change Applications for this right: \_\_\_\_\_cfs and/or \_\_\_\_\_14 ac-ft. QUANTITY OF WATER: SOURCE:Kings Meadow Creek COUNTY: Sevier S 1,011', E 1,711' from NW corner of POINT(S) OF DIVERSION: \_\_\_ Section 28, T23S, RlW Description of Diverting Works: Kings Meadow Creek POINT(S) OF REDIVERSION The water has been rediverted from \_\_\_\_\_\_ at a point: \_\_\_\_\_ Description of Diverting Works: 9. POINT(S) OF RETURN The amount of water consumed is \_\_\_\_\_ cfs or \_\_\_\_\_ ac-tt. The amount of water returned is \_\_\_\_\_ cfs or \_\_\_\_ ac-ft The water has been returned to the natural stream/source at a point(s):

\*These items are to be completed by the Division of Water Rights.

10	10. NATURE AND PERIOD OF USE		
	Power:         From		
11.	11. PURPOSE AND EXTENT OF USE  Irrigation: 4 · 667 acres. Sole supply of acres. Stockwatering (number and kind):  Domestic: Families and/or Persons.		
	Municipal (name): Mining District in	the	Mine
	Ores mined:	Capacity:	
12.		, T23S, R1W, SE/4,	
13.	Reservoir Name: Storage Period Capacity: ac-ft. Inundated Area: acres.  Height of dam: feet.  Legal description of inundated area by 40 tract(s):		
14.		OSED ********	
	Balance of the water will be abandoned:, or will be 6. COUNTY: Sevier	used as heretofore:	
17.	7. POINT(S) OF DIVERSION: S 869', W 1,931' from SW cor		
	Description of Diverting Works: "COMMON DESCRIPTION:		
18.	8. POINT(S) OF REDIVERSION  The water will be rediverted from		
	Description of Diverting Works:		
	P. POINT(S) OF RETURN  The amount of water to be consumed is cfs or ac- The amount of water to be returned is cfs or ac- The water will be returned to the natural stream/source at a point(s):		

20.	NATURE AND PERI	OD OF USE				
	Irrigation:	From/	/ to	//	<u> </u>	
	Stockwatering:	From/	/ to	//	<u></u>	
	Domestic:	From/	/ to		_	
	Municipal:	From/_	/to			
	Mining:	From/	/ to	_//_		
	Power:	From/_	/to			
	Other:	From 05 /30				
21.	PURPOSE AND EXT	ENT OF USE				
	Irrigation:	acre	s. Sole suj	pply of	acres.	
	Stockwatering (nun	nber and kind): _				
	Domestic:					
	•				lining District at the	
	• ,					
					Type: Ca	
	Other (describe): U	se water fo	or gas	well d	rilling	
	•					
22.	PLACE OF USE					
					ction 17, T23S, R1W	
			:	·		
			<del>-</del>			
23	STORAGE					
217.					Storage Period: from	
	Capacity:					
	Height of dam:		anaaroa n	rou:	acros.	
		-	hu 40 trac	t(s)·		
	-					
24.	EXPLANATORY					
	The following is set water rights used fo	forth to define nor the same purpo	nore clear ose. (Use a	ly the full Idditional	purpose of this application. Ir pages of same size if necessar	y):
	Mack Dastrup	(435) 896-	-5206			(435) 896 <b>-</b> 8759
	P.O. Box 5701	25			P.O. Box 570056	
	Sigurd, Utah	84657			Sigurd, Utah 8465	7
	*****	*****************	****	* * * * * * * *	<b></b>	\$\tau \tau \tau \tau \tau \tau \tau \tau
	of the above-number	ered application [	through th	ne courtes nation co	he/she/they may have been as y of the employees of the Divi ntained herein, at the time	sion of Water Rights, all of filing, rests with the
				Signat	ach la blastry ure of Applicant(s)	12





State of Utah

Department of Natural Resources

ROBERT L. MORGAN Executive Director

Division of Oil, Gas & Mining

LOWELL P. BRAXTON Division Director OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

May 17, 2004

Wolverine Gas and Oil Company of Utah, LLC One Riverfront Plaza, 55 Campau NW Grand Rapids, MI 49503-2616

Re:

Wolverine Federal 17-2 Well, 869' FSL, 1901' FWL, SE SW, Sec. 17, T. 23 South, R. 1 West, Sevier County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the reference I well is granted.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-041-30031.

Sincerely,

John R. Baza
Associate Director

pab Enclosures

cc: Sevier County Assessor

Bureau of Land Management, Moab District Office

Operator:	Wolverine Gas and Oil Company of Utah, LLC										
Well Name & Number	Wolver	ne Federal 17-2									
API Number:	43-041-	30031									
Lease:	UTU-7										
Location: SE SW	Sec. 17	T. 23 South	<b>R.</b> <u>1 West</u>								

## **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admir . R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## 2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

• Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

Contact Dan Jarvis at (801) 538-5338

## 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which dr lling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Foard.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES

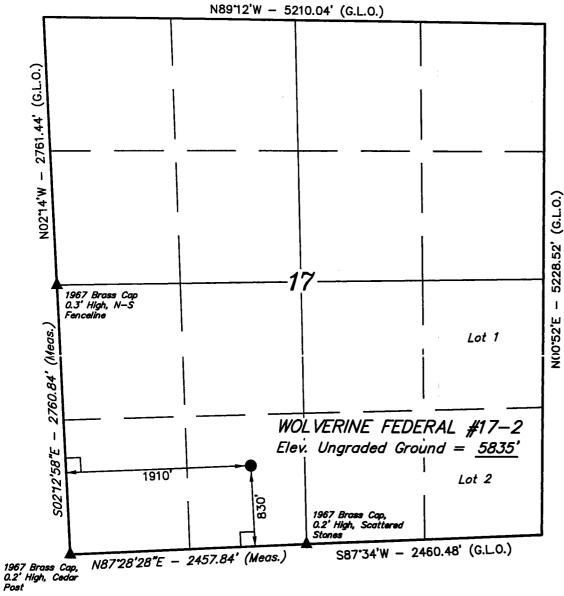
FORM 9

10	DIVISION OF OIL, GAS AN			5. LEASE DESIGNATION AND SERIAL NUMBER:
				UTU-73528  6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
SUNDR	Y NOTICES AND REPO	ORTS ON WELL	<b>S</b>	C. IF INDERVANCE
Do not use this form for proposals to drill drill horizontal:  1. TYPE OF WELL	new wells, significantly deepen existing wells be laterals. Use APPLICATION FOR PERMIT TO	pelow current bottom-hole depth DRILL form for such proposals	, reenter plugged wells, or to	7. UNIT OF CA AGREEMENT NAME: Wolverine Fed. Exploration Unit
OIL WELL	. 🔲 GAS WELL 🗹 OTI	HER		8. WELL NAME and NUMBER: Wolverine Federal #17-2
2. NAME OF OPERATOR: Wolverine Gas & Oil Cont	nony of Lifeh LLC			9. API NUMBER:
3. ADDRESS OF OPERATOR:		· · · · · · · · · · · · · · · · · · ·	HONE NUMBER:	4304130031 10. FIELD AND POOL OR WILDCAT:
	TY Richfield STATE UT	7 <sub>10</sub> 84701	(435) 896-1943	Exploratory
4. LOCATION OF WELL  FOOTAGES AT SURFACE: 830' F  QTRIQTR, SECTION, TOWNSHIP, RAI	FSL & 1,910' FWL 418902 42944 NGE, MERIDAN: SESW 17 23	X 38.79	3384	COUNTY: Sevier
				UTAH
11. CHECK APP	ROPRIATE BOXES TO IND	ICATE NATURE C	F NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TY	'E OF ACTION	
NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION
(Submit in Duplicate)  Approximate date work will start:	ALTER CASING  CASING REPAIR	FRACTURE T		SIDETRACK TO REPAIR WELL
6/16/2004	CHANGE TO PREVIOUS PLANS	NEW CONSTI		TEMPORARILY ASANDON
0/10/2004	CHANGE TUBING	PLUG AND A		UBING REPAIR VENT OR FLARE
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK	, 4150N	WATER DISPOSAL
(Submit Original Form Only)	CHANGE WELL STATUS		(START/RESUME)	WATER SHUT-OFF
Date of work completion:	COMMINGLE PRODUCING FORMAT	TIONS RECLAMATIO	N OF WELL SITE	OTHER:
	CONVERT WELL TYPE	RECOMPLETE	- DIFFERENT FORMATION	
Wolverine Gas & Oil Com South bearing the following like to extend the length of	ng coordinates: 830' FSL & 1 of the reserve pit ten (10) feet well and extending the reser	ne) proposes to mo ,910' FWL with a g t to the North in rek	ve the Wolverine Fe rade elevation of 5, ition to the existing	ederal #17-2 well location to the 774 feet. Wolverine would also rig layout design. Moving the the already permitted Wolverine
* Approximate date work	will start is on or about June  Approved by the  Utah Division of  ii, Gas and Mining	16, 2004.		O 2004  GAS & MINING
NAME (FLEASE PRINT) Shawn BO	Jana Brud	TITLE	Authorized Agent	04
(This space for State use only)  Faders! A Action is	pproval of this Necessary			OFY SENT TO OFFRATOR The: 6-18-04 Take: CHO

(5/2000)

(See Instructions on Reverse Side :

## T23S, R1W, S.L.B.&M.



### LEGEND:

\_\_ = 90° SYMBOL

= PROPOSED WELL HEAD.

 $\blacktriangle$  = SECTION CORNERS LOCATED.

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)

LATITUDE = 38.4751.07" (38.797519)

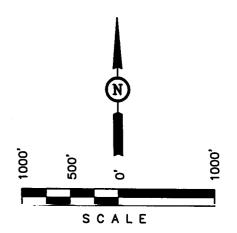
LONGITUDE = 111'56'05.24" (111.934789)

## WOLVERINE GAS & OIL CORP.

Well location, WOLVERINE FEDERAL #17-2, located as shown in the SE 1/4 SW 1/4 of Section 17, T23S, R1W, S.L.B.&M., Sevier County, Utah.

#### BASIS OF ELEVATION

SPOT ELEVATION LOCATED NEAR A ROAD IN THE SW 1/4 OF SECTION 17, T23S, R1W, S.L.B.&M., TAKEN FROM THE SIGURD QUADRANGLE, UTAH, SEVIER COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5774 FEET.



#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE RUT WAS ARREST FROM
FIELD NOTES OF ACTUAL SURVEYS MADERALY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORREST TO THE
BEST OF MY KNOWLEDGE AND BEDE

REGISTERED LANDASURVEYOR
REGISTRATION NO. 161318
STATE OF UTAH

REVISED: 5-27-04

# UINTAH ENGINEERING & LAND SURVEYING 85 SOUTH 200 EAST - VERNAL, UTAH 84078

(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: DATE DRAWN 3-4-04 3-10-							
G.O. D.J. C.G.	REFERENCES G.L.O. PLA	AT						
WEATHER COOL	FILE WOLVERINE GA	AS & OIL CORP						

## DIVISION OF OIL, GAS AND MINING

## **SPUDDING INFORMATION**

Name of Company:	WOLVER	INE GAS & OIL	COMPANY UT
Well Name:	WOLVERI	NE FED 17-2	
Api No: 43-041-300	31	Lease Type:	FEDERAL
Section 17 Township	23S Range	01W County_	SEVIER
Drilling Contractor	CDDT	RIC	G#10
SPUDDED:			
Date	07/02//04		
Time	8:00 AM		
How	ROTARY	_	
Drilling will commen	nce:		
Reported by	DAVID SPITZ		
Telephone #	1-918-645-6671		
Date <u>07/02/2004</u>	Signed	СНД	

## CONFIDENTIAL

FORM 9

### 012

## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

2 DIVISION OF		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528					
SUNDRY NOTICES	AND REPORTS ON WE	LLS	6. IF IN	DIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposals to drill new wells, significantly drill horizontal laterals. Use APPLICA	deepen existing wells below current bottom-hole of the properties	epth, reenter plugged wells, or to sals.		or CA AGREEMENT NAME: verine Fed Exploration Unit			
1. TYPE OF WELL OIL WELL GAS V	/ELL OTHER Drilling Wel			NAME and NUMBER:			
2. NAME OF OPERATOR:	9. API N						
Wolverine Gas and Oil of Utah, LLC		43	-041-				
3. ADDRESS OF OPERATOR: 55 Campau, NW CITY Grand Rapid	ds <sub>STATE</sub> MI <sub>ZIP</sub> 49203	PHONE NUMBER: (616) 458-1150	_	D AND POOL, OR WILDCAT: enant Field			
4. LOCATION OF WELL				•			
FOOTAGES AT SURFACE: 830' FSL & 1901' FV	VL		COUNTY	: Sevier			
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SE	SW 17 23S 01W		STATE:	UTAH			
11. CHECK APPROPRIATE BO	OXES TO INDICATE NATUR	OF NOTICE, REPO	RT, OF	ROTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION					
NOTICE OF INTENT	DEEPEN			REPERFORATE CURRENT FORMATION			
(Submit in Duplicate) ALTER CASI	FRACTU	RE TREAT		SIDETRACK TO REPAIR WELL			
Approximate date work will start: CASING REP	AIR NEW CO	NSTFUCTION		TEMPORARILY ABANDON			
CHANGE TO	PREVIOUS PLANS OPERAT	OR C HANGE		TUBING REPAIR			
CHANGE TUI	BING PLUG AN	D AB ANDON		VENT OR FLARE			
SUBSEQUENT REPORT CHANGE WE (Submit Original Form Only)	LL NAME PLUG BA	СК		WATER DISPOSAL			
Date of work completion:	LL STATUS PRODUC	TION (START/RESUME)		WATER SHUT-OFF			
	PRODUCING FORMATIONS   RECLAM	ATION OF WELL SITE		отнек: <u>report of drilling</u>			
CONVERT W	ELL TYPE RECOMP	LETE - DIFFERENT FORMATION		progress			
PLEASE KEEP THE ENCLOSED INFO Spud & Surface Casing Report Well Spud 09:00 7/2/04 TD 12-1/4" hole @ 1542' kb @ 17:30 7/ Run 35 jts 9.625" od 36ppf J55 STC 8rd Halco cemented with 360 sx 65:35:6 (12 Job complete 13:00 7/4/04	RMATION CONFIDENTIAL - 3/04 I new casing; shoe @ 1542, F	THANK YOU C <b>(</b> <u></u> ) 1498					
Steven R. Hash - EXAC	T Engrg (918) 599-9400	TLE Consultant & Age	ent for \	Nolverine Gas & Oil			
NAME (PLEASE PRINT) STEVENT TO THE STATE LAND		7/6/2004		***************************************			
SIGNATURE 2 444 12. TO		ATE 170/2004					

(This space for State use only)

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#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM** 

Operator:

Wolverine Gas and Oil Company of Utah, LLC

Operator Account Number: N 1655

Address:

55 Campau NW, One Riverfront Plaza

city Grand Rapids

zip 49503-2616 state Mi

Phone Number: (616) 458-1150

Well	Name	QQ	<b>3ec</b>	Twp	Ring	County		
Wolverine Federal 17	<b>/-2</b>	SESW	17	238	1W	Sevier		
Current Entity Number	New Entity Number	8	pud Du		Entil El	ntity Assignment Effective Date		
99999	13995		7/2/200	4	7	121/04		
NAVA	N.A	NFIL	FNT	ΊΔΙ	· · · · · /	<del></del>		
	Wolverine Federal 17 Current Entity Number 99999	Wolverine Federal 17-2  Current Entity Number  99999   13995	Wolverine Federal 17-2 SESW  Current Entity New Entity Number  99999 13995	Wolverine Federal 17-2         SESW 17           Current Entity Number         New Entity Number         Spud On 7/2/200	Wolverine Federal 17-2         SESW         17         23S           Current Exitity         Number         Spud Date           Number         Number         7/2/2004	Wolverine Federal 17-2         SESW         17         23S         1W           Current Entity         Number         Spud Date         Entity           Number         7/2/2004         7		

API Number	Well Henre	QQ	Sec	Twp	Rng	County
Action Code Current I Numb	Indity New Entity or Number	8	pud Du		En	lity Assignment Effective Date
Comments:		<u> </u>				

API Number Well Name	QQ Ses Twp Rng County
Action Code Current Entity New Entity Number Number	Spind Date Entity Assignment Effective Date
Comments:	

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

Timothy J. Brock

Manager-Engineering

7/20/2002

(5/2000)

**RECEIVED** JUL 2 1 2004

**EXACT Engineering, Inc.** 

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

## CONFIDENTIAL

August 13, 2004

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 17-2 well Sec 17 T23S R01W Sevier Co., UT API# 43-041-30031

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily activity reports for the subject well for the month of July 2004. Wolverine respectfully request that this information remain confidential for the maximum period allowed. As always, please contact either Wolverine or me if there are further questions.

Very Truly Yours, Steven 72. Will

Agent for Wolverine Gas and Oil Company of Utah, LLC

Copies with attachments via email to:

Wolverine - Gary Bleeker, Richard Moritz, Sue Benson, Sid Jansma, Jr., Tim Brock **EXACT Engineering – well file** 

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DIV. OF OIL, GAS & MINING

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BOTTOMHO	LE ASSE	EMOLY	LENGT		O.D.	I.D.		FORMATIO	~	MD	ļ	TVI	<b>.</b>	LITHOL	.OGY	-	Rig No		INFO	
Bit				1.50	12.250 9.625		-		+		<del>                                     </del>			<b>†</b>		_	Cell No		(918	645-667
Motor & Xo Monel DC				1.45	7.750	2.	500				<del>                                     </del>						Last B	OP Tes	1	
MWD				5.09	7.750		BC	TTOMS UP	TIME	BG GAS	G	AST ATA		TRIP	GAS			OP Tes		<u> </u>
FS, SS, X	over		13	3.00	7.750	2.	500					SHO WS		<u> </u>				afety M	eting	
8" DC (4)			113	3.34	8.000		500	GAS UNITS	5	FROM	F-	TO	)	ROP (F	THR)			OP Drill perate l	Pine F	ar -
6" DC (19)	)			7.50	6.000	<del> </del>	250 826		-+		╁──			<del>                                     </del>				perate I		
4-1/2" DP Total BH			1,552	9.44	4.500	3.	020		$\neg +$	<del></del>	†						Last C	perate /	\nnuk	×
STRING WT.		AWT.	PUW		SO WT.	ROT. TO	QUE G	RD. ELEVAT	TION	GL TO KB	1	KB ELEV		NTERMED	NATE CS	3	LAST	CASING	NE	XT CASING
68		80	75		20	<u> </u>		5,835		12	<u> </u>	5,8	4/							
	INCL.	AZMUTH	TVD	SECTION	N+/S-	E+/W-	DLS	TOOL	MD	SURVE		WUT I		TVD	SECT	ION	N+/S-	E+/W-	DU	TOOL
		229.70	974	30.52		-30.52	0.32	MWD	1,354	2.10	21	3.90		1353	41.	73	-29.38	<del> </del>	0.4	
1,164 2	2.50	220.10	1163	37.74	-24.09	-37.74	0.96	MWD	1,542	2 2.78	22	5.21		1541	46.	87	-35.50	-46.87	0.4	6 MW
									DA	ILY ACT	IVITY									
6:00 1	TO 12:00	HRS 6.00		T 24 HOUF		5' slid '	1.0 hrs	from 10	025'-10	37' & 1	120'-1'	35'.								
	12:30	0.50	_	ervice f		<del>, , , , , , , , , , , , , , , , , , , </del>														
	17:30	5.00	Dr	rilling 1	245'-15															
	19:00	1.50						ttoms up		min.				<del></del>						
_	23:30	4.50						al tools												
	2:00 4:00	1.50 2.00			nt spots . Spot 1			m to bo	com.											
	6:00	2.00		OH.	. <b></b>		P													
6:00																				
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0:00			+ .	lud usa	ge 106	sxs gel	, 12 s>	anco d	irill, 4 s	x caust	ic soda	· · · · · · · · · · · · · · · · · · ·								
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							707						REP()		. *	A	\PI#		41-30		]	
perat	OF: V	Volverine WELL	GEO Co	or Uu	m, LLC	CONTRA		***					STATE		SPUD DATE		FÉ		SUPERVE			
07/0	5/04		rerine F	edera	17-2				Rig#1	0		evie	r, UT	ING TIME	07/02/04 ROP		ORMAT	TION		avid H. DEF		-
AYS F/ S		PRESENT	OPERATIO		\D		TOTA	L DEP	тн <b>542</b>	PRO	OGRESS			.00	0.0			apien				6,600
	3	<u></u>		IU BC	<i>P</i>		<u> </u>	-,,	<u> </u>		UD D/	TA										
WT		VIS.	WL		CK I	મ	SAND	T	SOLIDS '	_	PV	ΥP	GELE	DEPTH	DATE/TIME	CHLC	ORIDES	C	ALCIUM	MBT	SAL	T PPM
	1												<u> </u>	<u> </u>	<u></u>							
											BIT DA	TA	T FOOTA JE	HOURS	ROP		UTR I	RPM	WOS	טט	LL CO	IOITION
IT 5	ZE N	FG.	TYPE	ADC CODE	1	NO.	JE	ets (1/7 or th	32nd") FA	$\perp$	*		10011101			_		RT+MTR			В	G
-	1/4" SI	DBS >	(L-12	437	7427	85		0.9	6		80	1542	1462	29.00	50.4		Υ .	40/164	42	1,2	+	1/16"
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$oldsymbol{\perp}$				L		_				-			+		#DIV/0	-	-1			H		
	L_			<u> </u>					RAULI								1		SLO	N PU	MP	
		ACTURER	LINER	STROP	KE GAL/ST	d SPM	G		AV DP	AV DC	PUMI	,	MTR DIFI	H	₩ / IN <sup>2</sup>	EC	D		60 spn	80:	spm	100 spm
PUMP NO.	MANUF	ACTURER	LIVEN	LENG1				$\dashv$			PRES	s.	PRESS.						<u> </u>	+	$\dashv$	
1	Wile	on 600	5"	14	<del></del>	72	+-	90			+	+		-		-	$\neg$	2	<del>                                     </del>	十		
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Both			<u> </u>		8.06	146	] 3	00 1	122	135	1 150	<u> </u>	GEOL X	SIC:			$\equiv$		GENE	RAL	INFC	
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				$\dashv$		╁			GAS UNIT		FROM		SHC WS	io	ROP	FTAIR)			SOP Dr			
			+-			+			<u> </u>										Operate			
i			<b>†</b>									$\bot$			<u> </u>				perate			
	BHA:			0.00		1	TORQUI		RD. ELEVA	TON	GL TO K	<del>.</del>	KB EL	EVATION	INTERME	DIATE C	\$G	LAST	Operate CASING		NEXT	CASING
STRIN		BHA WT.	PU V		50 WT.	- ROI.	TORGOL	1	5,835	1	12		5,	847				<u> </u>		上		
	<u> </u>										SURV	EYS							1 =		DLS	TOOL
MD	INCL	AZIMUT	H TVD	SEC1	TION N+/S	- E+1	W-	DLS	TOOL	MD	INC	L	AZIMU" H	_	TVD	SEC	TION	N+/S-	E+ / V	+	<u>ULS</u>	, ical
	<del> </del>		<del>                                     </del>	╁			+		+-	╂	+-	-+		_		1						
	<u> </u>		<u> </u>							<u> </u>	AILY A	CTIV	/ITY =									
FROM	ТО	HRS	L	ST 24 H	OURS:																	
6:00			R	ig up	casing o	rew								514M-	- 60 1400°							
8:00	_						6# J-	55 c	asing 1	542	KB. Sh	10e (	U 1542', 1	FIORI COHA	r @ 1498'.		·					
10:0			_		sing crea		Safel	v m	eeting	<del></del>												
10:3			1 5	CU Ma	nt 9_5/R"	casin	with	360	) sxs of	12.8	ppg le	ad c	ement, 2	80 sxs of 1	5.6 tail cen	nent.	Circ	45 bb	s to pi	L TC	C a	surfac
11:3 13:0					and clea														<del></del>			
19:3			)   N	ID 13	-5/8" hy	drill an	d spo	ols														
0:0				IU 11	" 5M do	uble ra	ms, 3	M h	ydrill a	nd rot	ating h	nead	<u> </u>								<del></del>	
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0:0	00			Daily	Drilling (	Cost in	clude	s \$8	55,000	KIG M	ODIIIZA	uon	charge									
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Dai	ly Total	24.0	00								COS	- 111	<del></del>									

DUNI JULIYIHL

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				G&O Co				ā				_			REP				-	API	# 4	3-0	41-30	031	
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	7/06/			verine F		17-2	<u> </u>			Γ Rig#				vier	<u>, UT</u>		IG TIME	07/02/0 ROP	4	FORM	ATION			AVID SP	itz
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art I	SIZE	MFG		TYPE	IADC	SERIAL	NO. I		JETS (1	1/32nd")	—т	BI	T DAT	A UT	FOOT/	Œ	HOURS	ROP		MTR	Ri	- 1	WOB		MOITIGH
ю.	- JK.E				CODE	ļ			or T				<del>                                     </del>		-	_	20.00	50.4		Y	<del>.                                      </del>	MTR 164	42	T B	g 1/16"
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NC 1	-	Wilson	600	5"	LENGTH	4.03	72	1	290	<del>                                     </del>	1	+	. I.E.30.	1	, ,,,,,,,,							1			
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60	MOM	TÓ	HRS	LAS	T 24 HOU	RS:						DAIL	YACT	IIVI	<u> </u>										
	00	9:00	3.00		J BOP																				
9:	00	15:00	6.00			BOP te																			
-		15:30	0.50	Te	st Upp	er kell	y valv	to 3	3000	psi O	K	a bi	ind mr		<del></del>										············
_		20:00	4.50 2.00	Ri	g repa	ir, repla e ram,	chack	value.	e and	d. cate	valvi varon	es f	o 300	<u>''</u>	si OKi		<u></u>								
		22:00	1.50	Ri	d teba	ir, repl	ace O	ring	betw	een h	ose a	end (	choke	ma	nifold.										
_	3:30	0:00	0.50			ke line																			
	:00	0:30	0.50	Te	st hyd	rill to 1	500 p	si, fa	iled																
	:30	1:30	1.00			d ram			, OK	. Test	casi	ng t	0 1500	) ps	I OK.										
_	:30	3:00	1.50	R	g Rep	air, ND air, Wa	Hydri	li Avdei	1 ~~	mina f	mm F	3004	Sprin	1018	wy										
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	:00		†	1																					
⊢	:00			F	uel Us	age 12	6 gals											04:			<b></b>		4	Defore	ned .
-	:00			M	ud usa	ge 36	sxs g	, 25	SXS C	austic	soda	a, 6	sxs ar	nco	pac, 4	39 9	sxs salt, 1	2 sxs stan	cn, 6	gai	HOW	Zan	, rgal	Denosin	iiGI I
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DATE		ľ	VELL.				CONTRAC		DT Rig	#1N		1	-	STATE UT		97/02/0		VFE.		SUP		vid S		
	/07/(		PRESENT	OPERATION	NS			TOTAL	DEPTH		PRO	GRESS		DRILLIN		ROP 24.4	F		ATION Leapien		AUTH	DEPT	6,600	
	5		C	Orilling A	head	@ 1652	<u> </u>		1,652			110 UD DA	Ā	4.0					парто.					E
,	VT		VIS.	WL	T	CK PI	1 1	SAND	801	.ids %			æ	GELS	DE TH	DATE/TIME	CHLC	ORICE	8 0	ALCI	UM A	18T	SALT PPM	7
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BIT	SIZE	MF	G.	TYPE	IADC	SERIAL	ю.		8 (1/32nd)	)	T		ਯ	FOOTAGE	HO JRS	RÓP	T	MTR	RPM RT+MTR		ОВ	DULL T I	CONDITIO	
NO.	2-1/4	r so	BS )	Q12	437	74278	5		0.96		8	30 15	542	1462	29.00	50.4		Y	40/164	4		1,2	1/16	
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ᆜ		<u> </u>						<del>-</del>	YDRA	UUC	<u> </u>										LOW			1
PUN	PI	MANUFA	CTURER	LINER	l .	E GAL/STK	SPM	GPM	AVI	DP	AV DC	PUMP PRESS.	Τ	MTR OFF PRESS.	14	HP/IN <sup>2</sup>	EC	Ö	$\Box$	60	spm	80 sp	m 100 s	
NC 1		Wilso	n 600	5"	LENGT	4.03	72	290		士									1					4
2		Wilso		5"	14	4.03	74	0		工		<b></b>	1		<b> </b>		<del> </del>		2					$\dashv$
Во	n [					8.06	146	290	<u>'                                    </u>			<u> </u>		GEOLOG	<del>_</del> =				<u> </u>	G₽	RER	AL IN	FO	目
BÓ	TOMH	OLE AS	SEMBLY	LENG		O.D.	I.D.	#	FORM	ATION	1	MD	T	TVC		LITHO	LOGY		Rig N	_	RIG	NFO		$\exists$
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	or (1.: Pin X	5 Deg O			1.35	6.500 6.250					士		上	GAS DATA					Last					4
Mor				3	1.52	6.250			BOTTOMS	UP TI	Æ	BG GAS	Ŧ	GAS DATA CONN	GAS	TRIP	GAS		Next Last				7/	$\dashv$
Put					5.86	6.312 6.375	-	500		UNITS	ㅗ	FROM	<u></u>	SHOWS		ROP	F (AHR)		Last			~ · · · ·		
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хо					2.73	6.437	+	.250			-		╀				<del></del>		╂─				-	ㅓ
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16 81	Steal B	HA:	BHA WT.	PUV	7.39 VT	SO WT.	ROT. TO	XRQUE	GRD. EI		5N	GL TO KB	#	KBELE		INTERME	DIATE C	83	_	1 CA		P	6600	G
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	40 T	INCL	AZIMU	H TVD	SECT	ION N+/S	E+/W	- Di	s To	OOL	MD	INCL		AZIMUTH	<b>丁二</b>	TVD	SEC	CTION	N+/S	-	E+/W-	DA	S TO	XOL
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-	ROM	ŤΟ	HRS		ST 24 H				u															
_	:00	10:30		R	ig rep	air, Wait drill. Pres	sure te	st to	1500 (	osi O	K													
-	:00	15:30	-	N	U rot	ating hea	d and i	nstall	wear	bust	ing										<del></del>			
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																	: ", :		1 200				
		Engir	neering	& Su	pervisi	on		7	XAC	T E	ngir	neer	ring	, Inc.				(9	18) 59	<b>9</b> 9	400	111	- Creat
Operat	or: Y	Volverine	G&O C	of Uta	n, LLC				LYC	RII	LLI	NG	RE	POI	रा		·	AP	# 43-	04	1-30	031	
DATE	0404	WELL		·	47.0	CONT	TRACT		T Rig#1	40		1	TY, STAT			9PUD DAT		AFE		SU	PERVIS N:	OR Ivid S	nitz
07/0 DAYS F/S			Verine F		17-2	1	T	TOTAL D			ROGRE	88		DRILLIP	ig 71 IE	ROP	-		ATION	1		DEPTI	
	3	<u> </u>	Unpl	ugging	mwd				2,011			59		10	.00	35.9			Vrapie	<u>n</u>	<u> </u>		6,600
WT	-	VIS.	WL.		ск ]	PH	s	AND	SOLIOS	*	PV	DATA		GELS	DEPTH	DATE/TIME	CH	LORID	E6	CALC	H.M.	WET	SALT PPM
9.7		32	8.0	1	/32 1	1.5	0	.25	0.5		3	4		2/3	1886	7/7 7:00 PM	10	65,00	0	14	0	$\perp$	
ent su	75 Y 14	FG.	TYPE	IADC	SERIAL	NO. I		IET9 (	1/32nd")		BIT	DATA		OTAGE	HOURS	ROP		MTR	RPM	7 V	WOB	DELL	ONDITION
NO.				CODE				or or	TFA	4		ļ			<u> </u>	ļ			RT+MTF	丰		ΤВ	-
1 12-			(L-12 (530S	437 537	10383		15	_	96 5 1	15	80 1542	154	2	1462 469	29.00 14.50	50.4 32.3		Y	40/16- 35/12	+	0/25	1,2 1	1/16"
		2012		50.												#DIV/0						工	
					<u>L</u>					$\perp$		<u> </u>			<u></u>	#DIV/0	! .	<u> </u>		L			<u> </u>
PUMP	MANUE	ACTURER	LINER	STROK	GAL/ST	K SP	w 1	GPM	DRAUL	CS AV D	СР	UMP !	MTR	DIFF	н	IP/IN²	ε	CO	-			PUM 80 spn	100 spn
NO.				LENGT		<u> </u>	_			ļ		ESS.		SS.					山	F	$\dashv$		<b>F</b>
2		n 600 n 600	5" 5"	14	4.03	72	-	290	-	-	+								2	╁	$\dashv$		<del> </del>
Both	V V BOX	JUU	<u> </u>	, <del>'-</del>	8.06	14	-	290	186	253	3 1	430	2	00		168	9	9.8					
			RLL ST										GE	oLogi						Gŧ		T.M	ō
BOTTO	WHOLE AS	SEMBLY	LENGT	.00	0.D. 8.750	-	I.D.	_	FORMATION Arapier	-	1,90			1,90	0	100% Shale		input	Rig N	ю	RIG	NFO	
Motor (	1.8 Deg	)	-	.46	6.500	+													Cell N			(918)	645-6671
Obl Pin	хо		<del></del>	.35	6.250	+			.:				G	AS DATA		1			Last				7/6
Monel Pulser				.52	6.250	+	3.0 3.0	_	TOMS UP	TIME	BG G	AS		CONN	AS	TRIP	3AS				Test	etina	7/6
Float su	ıb XO			.91	6.37	+	2.5	_	GAS UNITS	s [	FRO	M I		SHOWS TO		ROP (F	(AR)		Last I	****			
SS				.00	6.750	_	2.2	_		$\perp$						<b></b>						pe Ra	
XO 20 6" D			589	.29	6.000	+	2.2	_		-		$\dashv$				-			_			ind Ra nnular	7/6
XO	<u>~</u>			1.34	6.560	+	2.2	-		$\top$										<u> </u>			
Hydrau	ic Jar			2.18	6.25	+	2.2					$\Box$											ļ
XO 3 6" DC				2.73	6.43	+	2.2			+		$\dashv$				<del> </del>			<b> </b>				<del> </del>
XO	<b>,</b>			.80	6.00	+	2.2	_		$\dashv$		$\dashv$	······································										
DP			1,214	.00	4.500		3.8	26		$\Box$													
Total I		HAWY.	2,010 PUW		SO WT.	ROT	TORK	IVE G	O. ELEVAT	TION	GL TO	KOB .		KB ELEV	TION	INTERMED	ATEC	>8G	LAST	CAS	NG	NEX	CASSING
75		55	75		48	$\mathbf{L}$			5,835		12			5,84	7	N.				542			600
		Tarmer-	Inc	er	ul Ata re	T e	w	DLS	TOOL	MO		VEYS		AUTH		TVD	SEC	CTION	N+/S-	ΙĒ	+/W-	DLS	TOOL
MD 1,781	5.60	AZIMUTH 268.90	1779	8.44	N+/8- -38.93	_		1.47	MWD			.60		3.10		1900		.67	-37.5	_	6.81	1.49	
1,841	6.30	280.90	1839	5.33	-38.36	69.	.91	5.33	MWD			.10		1.00	<u></u>	1933	0	).11	-37.3	9 -8	30.74	1.69	MWD
FROM	TO	HRS	LÁST	24 HOU	es:					D.	ALY	ACTIV	ΛΙΥ										
6:00	7:00	1.00	Dri	lling fi	om 165																		
7:00	8:30	1.50	+				. Pu	t up ir	surfac	e pip	e. Co	nditio	n mu	d with I	LCNI.								
8:30 9:00	9:00 14:00	0.50 5.00			to boti om 169		326'																<del></del>
14:00	20:00	6.00						into s	urface	pipe.	Mix 2	275 bt	bs in	oremix	pit.								
20:00	23:30	3.50			om 182																		
23:30 1:30	1:30	1.50			VD is p				M ent hou	sina				<del></del>									
2:30	4:30	2.00	<del></del>	p to b		0		-7 -															
4:30	5:00	0.50			om 194																		
5:00 6:00	6:00	1.00	Pk	igged	MWD.	Tryin	g to	unplu	g with v	vater	swee	Ф.	·					<del></del>					
0:00																							
0:00					ge 462		_																
0:00	<u> </u>	-	Mu	ıd usa												o pac, 56 s its defoame		nica,	56 sxs	nur	tshell	<u> </u>	
Daily 1	otal	23.50	<del> </del>		394	375	odk,	31 53	<i>⇒</i> <b>3</b> ± <b>3</b> 1 <b>9</b>	ros, <i>21</i>	3/35	out Cl	, 7 %	NO INUM	cons + ye	no vervente	•						
												T DAT											

																			7.34		: 5 E
		Eng	ineerin	g & Si	pervis	ion		•	XAC	T E	Engir	100	ring, Inc	<del>.</del>			7	18) 591	9400		11
Opera	tor: \	Notvert	10 GBO C	o of Ut	n, LLC			Ad	LY	DRI	LLII	NG	REPO	RT		,			041-3	0031	
DATE 07#	09/04	WELL WA	dverine	Forters	i 17-2	CONT	RACTOR C	יממ:	T Rigg#	10			ier, UT		97/02/0	- 1	VFE		SUPERVI	sor NavidS	nitz
DAYS FI	SPUD		NT OPERAT	ONS	****************	J		AL DE	PTH		PROGRES	S	DRILL	ING TIME	ROP		ORM		AUT	H. DEPT	•
<u> </u>	7	<u> </u>		TIH			Щ		,024		MUD	3 DAT		.00	13.0			rapien			6,600
WI		VIS.	WL		СК	PH	SAN	3	SOLID	3 %	PV	YP		DEPTH	DATE/TIME	CHLC	ORIDE	<b>8</b> C	ALCIUM	MBT	SALT PPM
8.7		37	8.0	<u> </u>	1/32	0.0	0.00	<u> </u>	0.5		8 BIT	16		201:1	7/8 6:00 PM	40,	,000		110		66,000
	NZE N	FG.	TYPE	IADC	SERIA	NO.	J		/32nd")	T	IN IN	OU	<u></u>	HOUR 3	ROP	•	WTR	RPM	WOB		CONDITION
1 12	-1/4 SI	DBS	XL-12	437	742	785		0.9		$\dashv$	80	154	12 1462	29.0)	50.4	$\dashv$	Y	RT+MTR 40/164	42	1,2 1	1
2 8-	3/4° SI	DBS	X530S	537	1038	3994	15	15	5 1	15	1542		482	15.5)	31.1		Y	35/120	10/20		
$\vdash \vdash$	+	-		├	<del> </del>			├-	-	$\dashv$				<u> </u>	#DIV/0		$\dashv$			$\vdash$	
H				<u> </u>	<u> </u>			HY	DRAUL	ics					1 2010/0	<u>''                                   </u>			SLOV	PUM	
PUMP NO.	MANUF	ACTURER	LINER	STROK	E GAL/ST	K SPI	1 G	PM	AV DP	AV	DC PU		MTR DIFF PRESS	H	IP / IN <sup>2</sup>	ECD	,	T	60 spm	80 spn	100 spm
1	Wilse	on 600	5"	14	4.03	72	2	90					ricas.		·····			1			
2	Wilse	on 600	5"	14	4.03	74		0			$\bot$	$\supset$						2			
Both	<u> </u>				8.06	14	B 2	90	186	25	3 14	30	200		168	9.8	Ц				
BOTTO	MHOLE AS		DRHLL S		O.D.		D.	F	ORMATIO	N I	MD	$\Box$	GEOLOG TVC		Liftio	rogy			GENER RIG	MFO	-
Bit			<del></del>	1.00	8.75	_			Arapie	<u>-</u>	1,900	<u>-</u>	1,90	10	100% Shale	w/ Im ir	npu	Rig No			
Motor Obt Pit	(1.8 Dec	1)		6.46 1.35	6.50	+		$\vdash$		$\dashv$	•	$\dashv$	<del>.</del>		<b>†</b>			Cell No Last B	OP Tes		645-6671 7/6
Monei			+	1.52	6.25	-	3.000	BOT	TOMS UP	TBJE	BG GA	5 ]	GAS DATA CONN	GAS	TRIP	GAS			OP Tes		7/6
Pulsar				5.86	6.31	-	3.000	<b> </b> _					SHOWS		<u> </u>		_		afety M		7/4
Float s	ub XO		+	1.91 8.00	6.37 6.75	+	2.500 2.250	F	GAS UNIT	5	FROM	$\exists$	TO		ROP (F	TAR()	$\exists$		OP Drift perate l		7/8 7/6
хo			+	1.29	6.25	+	2.250												perate (		+
20 6" [	С			9.67	6.00	+	2.250					$\Box$						Last O	perate /	Annular	7/6
XO Hydrau	dic ler			1.34 2.18	6.56	-	2.250 2.250	<b> </b>	<del></del>	$\dashv$		$\dashv$			<del> </del>		-				
хо	210 Gui		+	2.73	6.43	+	2.250					士									
3 6" D	C			1.54	6.00	+	2.250	_				$\perp$			ļ						1
XO DP			1,214	1.80	6.00 4.50	+	2.250 3.826	-		$\dashv$		┪			<del> </del>					<del></del>	+
Total			2,01	0.65	77.7								· · · · · · · · · · · · · · ·								
STRING 75		SHA WIT.	PU W		SO WT.	ROT.	ORQUE	GRE	5,835	TON	GL TO 1	(B)	KB ELEV. 5,84		INTERMED				ASING		CASING GOO
						<u></u>					SUR	ÆΥ									
MED	INCL.	AZIMUT	H TVD	SECTIO	N N+/8	E+/\	<b>V</b> - D	LS	TOOL	MK	) #NC	1	AZIMUTH		TVD	SECTIO	ON	N+/8-	E+/W-	DLS	TOOL
	$t^{-}$	<del>                                     </del>		╁	†	$\vdash$	+	7		$I^-$	+	T									
										C	AILYA	CTIV	ЛТҮ								
6:00	7:00	1.00	1	T 24 HOU IMD W	rs: ater swe	ep to	unoli	a M	WD				<del>-</del>								
7:00	+	1.50			011'- 2			-													
8:30	+	0.50			d vol. C																
9:00 14:00		-	<del></del>		to unplu MWD	g MV	ru wit	n 30	DOIS Y	vater	sweer	).	<del></del>	<del> </del>							
16:00					MWD to	ools fr	om Ca	spe	r, WY												
	19:30	<del></del>	<del></del>		O tool #	3															
	21:30	_			Pump	12												<del></del>		<del></del> .	
	23:00				013'- 2		liding	201	3'-201	4')											
23:00			-		Pump:																
23:30 1:30	<del></del>	1.50			ol#3 fai eplace			ot re	egain s	singa	I										
3:00	4:00	1.00			) tool #																
4:00	6:00	2.00																			
6:00 0:00	1-	-			ge 453 ge: 159		nco o	el 7	8X8 21	nco t	parl 2	SXS 2	anco drill, 4	SXS Causti	c soda 5 e	XS SIV	OG 17	ac 30	sxs mi	ca. 31	SXS nutte
													starch, 6 s				1				
Daily	Total	24.00																			
										_	COST										

			Eng	ineerin	g & Sı	ıpervis	ion		EX/	ACT	En	gine	eri	ng, I	nc.			(91	18) 51	9-94	00		
Oper	ator:	. w	<u>_</u>	<b>GEO</b> C		•		DA				LING						API	# 43	-041	1-300	)31	
DATE			WELL.				CONTRACT		DT 0:	- 440		- 1		STATE		SPUD DATE		AFE		SUF	ERVISO		
DAYS F	/10/0			verine F		17-2			DT RI	<b>9</b> #10	PR	OGRES8	:vier	, UT DRIL	LING TIME	07/02/04 ROP		FORM	ATION			vid Sp L Depth	
	8				Drilling	9			2,58	1		570		1	9.00	30.0			Arapi	en	<u> </u>		6,600
	/T	7	VIS.	WL		ж	2H	BAND	Sc	OLIDS %		PV DA	YP.	GELS	DEPTH	DATE/TIME	СН	LORIDE	ES	CALC	IUM	MBT S	ALT PPM
8		+	33	12.0			1.0	tr		0.5	1		9	4/5	2340	7/9 6:00 PM	2	3,000		440	8		37,950
						T			S (1/32nd			BIT DA		OOTAG	HOUF S	ROP		MTR	RPM		voe I	OUR L	ONDITION
NO.	SIZE	MF		TYPE	CODE	SERIAL		JE	or TFA	·,	_				<b></b> _				RT+M	R		T B	G
_	2-1/4°  -3/4°	SDI		(L-12 530S	437 537	7427 10383		_	0.96 15	15		80   19 542	542	1462 1039	29.00 34.50	50.4 30.1		Y	40/16 35/12	-	42 0/25	1,2 1	1/16"
H	-3/4	130	<del>"</del>	3303	337	10303	334	~	-15	"	†	<del></del>		1003	34.0	#DIV/0!							
								$\Box$			$\perp$					#DIV/0!				$\perp$			
						lan tare	SPM	GPN	IYDRA		S AV DC	PUMP	1 .,	TR DIFF	,	HHP/IN <sup>2</sup>		CD				PUMP 20 som	100 spm
PUMF NO.		ANUFA	TURER	LINER	STROKÉ LENGTH	GAL/STK	SPM	GPR			AVDC	PRESS.		RESS.		race / III			止	<u> </u>	3	00 op	100 4
1		Wilson		5"	14	3.8	64	243	-	-			╀		<u> </u>		-		1 2	+	_		
2 Both	-	Wilson	1 600	5"	14	3.8 7.6	61 125	232 475		86	253	1140	╁	200	<del> </del>	168	8	.7	f				
Ë			—	ROLLS	TRING	<u> </u>		T						GEOL	OGIC					GE	NER	LINF	5
	OMHO	XE ASS	EMBLY	LENGT		O.D.	I.D.	7		ATION	Ŧ	мо 2,300	F		vo 295	SS 100%	ЭΥ		Rig I	No.	RNG f	VFO	
Bit Mato	(1.8	Deg)		<b></b>	.00	8.750 6.500		十		pien cien	_	2,300	$\dagger$	<del></del>	325	SS 30% SLST 20	% SH	50 9	Cell			(918) 6	45-6671
Dbl P					.35	6.250			Ага	pien	工	2,360	L	2,3 GAST	355	SH 70% SLST 30	%			BOP			7/6
Mone					.52	6.250		_	BOTTOM	SUPTR	Æ	9G GAS	F	CON	N GAS	TRIPGA	S			BOP	Test y Mee		7/9
Pulsa Float		XO			5.86 1.91	6.312 6.375		000 500	GAS	UNITS	<del>-</del>	FROM		SHO	WS	ROP (FT/H	9R)			BOP		u y	113
SS					3.00	6.750		250			工		L						Last	Open	ate Pl	pe Ran	
хо					.29	6.250		250			+		$\vdash$									nd Rac	7/6 7/6
20 6" XO	DC			589	1.34	6.000		250 250			╁		╁						Last	Open	ate Ar	HUNEI	//8
Hydra	aulic .	Jar			2.18	6.250	<del></del>	250			上												
хо					2.73	6.437		250					L						<u> </u>				1
3 6" [	oc_				.80	6.000		250 250			+		+			<del> </del>			┢				++
DP				1,785		4.500		B26			土		İ										
	I BH		AWT.	2,581 PUW		sowt.	ROT, TOR	NE.	GRD. EL	EVATIO		GL TO KB	╀	KB FLE	EVATION	INTERMEDIAT	E CSG		<u> </u>	STCAS	NG	NEX	CASING
_	2	╁	55	92		30 111.	NOT: TOX			835		12	İ		847	NA.				1542			600
												SURVE											
MD 2,09	_	NCL 9.80	AZIMUTH 234.60		-5.30		E+/W-	6.7	_	WD :	MD 2,380	6.20	_	23MUTH 84.30		7VD 2372	1	7.11	-78.6	_	+ /W- 28.60	DLS 6.24	MWD
2,22	-		218.90	<del>}</del>	3.54	+	-117.79				2,474		-	41.00		2465	24	1.19	-85.0	39 -12	27.01	3.49	MWD
		70			T 24 HOUR						DA	LYAC	ΠVI	Y								·· · · · ·	
6:00	_	TO 3:00	HRS 2.00				. Top of	pits	to low	er LC	M c	ontent i	n mı	ıd syst	tem.								
8:00		2:00	14.00	Dri	iting fr	om 202	1'-2377'																
22:0	_	2:30 5:00	0.50 5.00			mud wit		( 14	rd I ne	505 A	ne m	35 NN	s/hr	Plan	sane in k	eep increasing	LCI	A FA	AT to	ol is o	n loc	ation.	
6:00	_	0:00	6.00			£3/	. 2001	7		~ 0	64	,		, , , car)									
20:0	0 2	3:30	3.50																				
23:3		1:30	1.50	<b></b>																			
1:30	-	2:30 4:30	2.00	<del>                                     </del>	<del>, , , , , , , , , , , , , , , , , , , </del>	<del></del>																	
4:30	) !	5:00	0.50																				
5:0	-	5:00	1.00	-										<del></del>							<del></del>		
6:0	$\overline{}$																						
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0:0	0			M	d usag								_		da, 3 sxs	anco pac							
Das	/ Tota	al	37.00	<del> </del>		14 8	xs starc	1, 4 5	AS NO	w.ZdT	, <u>1 Q</u> 2	ans Gero	es (M	<del>71</del>									
F												COST D	ATA										

		En	gineeri	ng & S	upervi	sion		E	KAC	T E	naine	ering	ı. İ	nc.			ro	18) 49	nide	·	7	
Орег	itor:	Wolvert	ne GBO C	o of Uti	in LLC		D					RE						₩ 43	_	Personal B	7	#
DATE		WELL				CONTR			-			UNTY, STAT			SPUO DATE		AFE	18 43	SUPER			
07/ DAYS F	11/04 SPUD		NT OPERAT		17-2	<u> </u>		TALDEP			ROGRESS	evier, U			07/02/04				<u> </u>		wid S	
	9			OriMir	ng		"		995		414			LING TI AE	ROP 18.8		ı	ATION Arapie	ŀ	AUTH	i DEPTI	6.600
									-		MUD DI	(TX					<u> </u>	, supr.				0,000
W		VIS.	WL		CK	PH	SAN		SOLIDS	*	PV	YP GE	LS	DEI TH	DATE/TIME	Q	LORID	E\$	CALCIUM		MBT :	SALT PPM
8.	5	35	10.	8 1 1	/32   1	10.5	tr		0.5			10 7	9	28 26	7/10 6:00 PM	<u></u>	22,00	<u> </u>	320			36,300
BIT	RZE	MFG.	TYPE	WDC	SERIA	L NO.		JETS (1/3	2nd")		BITDA	TA OUT FOOT	AGI	HOL RS	ROP		MTR	RPM	Wo	. 1	D 8 1 6	ONDITION
NO. 1 12	-1/4" S	DBS	XL-12	CODE	<del> </del>			or TF:	-				_		ļ			RT+MT	1	4	T B	G
-			X530S	437 537	1038		15	0.96	1	Η.	80 1: 542	542 14 14	_	29.00	50.4		Y	40/16	+	-	1,2 1	1/16"
			7.0000	1 33.	1.000	1	10	╁┈	<del> </del>	<del>"</del>	3-2		33	56.50	25,7 #DIV/0!		Y	35/13	5 15/2	5	+	
													7		#DIV/0!			<b> </b>	1	+	+	
								HYD	TAULK	CS .									SLC	W	PUMP	
PUMP NO.	MANU	FACTURER	LINER	STROKE	1	SPM	1	SPM .	AV DP	AV DC	PUMP PRESS.	MITR DH			HHP/IN²	E	CD		30 sp	χη.	49epm	100 spm
1	Wik	on 600	5"	14	3.8	62	1 2	36			T FREE SS.	FRESE				╁			150	, †		<b>-</b>
2	Wits	on 600	5*	14	3.8	61	2	32										2	1	+	140	
Both	<u> </u>		<u> </u>	<u> </u>	7.6	123	4	67	186	253	1140	200			168	8	.7					
BOTTS	MARY E A	SSEMBLY	DRILL S		05							GE		ogic							LINF	5
Bit				1.00	o.b. 8.750	1.0	<u></u>		MATION apien	+	мо 2,500	+-	7V 2.4		SS 80% SH20%	3Y		Rig No		UG IN	ro .	
Motor	1.8 De	g)	26	5.46	6.500			-	apien		2,810	<del></del>	2,8		SS 80% SH20%			Cell N		(	918) 6	45-6671
Obl Pir	XO		1 1	1.35	6.250													Last 8	OP Te			7/6
Monel			<del>}</del>	.52	6.250		3.000	80110	MS UP TI	ME	BG GAS	G	ONN	GAS	TRIP GA	s		Next E	OP Te	st		
Pulsar Float s	uh XO	···································	1	.91	6.312 6.375	<del></del>	3.000 2.500						HOW		<u>L</u>		_		afety N		ing	7/11
SS	<u> </u>		1	3.00	8.750	<del></del>	2.250		SUNTS	+	FROM	<del>                                     </del>	TC		ROP (FT/H	R)			OP Dri		- D	7/10
хо			1	.29	6.250		2.250			+		<del>                                     </del>					$\dashv$		perate perate			7/6 7/6
20 6" E	С		589	.67	6.000		2.250												perate			7/6
хо			<del> </del>	.34	6.560		2.250			$\bot$												
Hydrau XO	ic Jar		<del> </del>	.73	6.250 6.437		2.250	<b>-</b>	·	+												
3 6" D(	:	***	<del></del>	.73	6.000		2.250 2.250		<del></del>	+		ļ			·							
хо			<u> </u>	.80	6.000		2.250			+							$\dashv$					$\vdash$
DP			2,600	.00	4.500		3.826															
Total		BHA WT.	3,396 PUWI		sowt.	ROT. TO	OA) E	G90 5	LEVATIO	<u>. L</u>	al TO KB		· ·		INTERMEDIAT							
92		55	120		80	1401.10	1000		.835		12		5.84	ATION 47	INTERMEDIATE NA	CSG	$\dashv$		CASING 542	+		ASING 100
											SURVEY	S	_							_		<b>=</b>
MD 3.570	INCL.	136.60	TVD	SECTION	N+/S-	E+/W-	_		OOL	MD	INCL.	AZIMUTI	_		TVD	SECT	_	N+/8-	E+/W	_	DLS	TOOL
2,570 2,696	4.70		2561 2687	29.97 39.73	-90.21 -98.35		-			2,823 2,950		116.20 112.50	+		2813 2940	49.		#####	-110.4	-	3.12	MWD
			1								LYACT				2040	57.	19	****	-100.8	3	1.24	MWD
FROM	TO	HRS		24 HOURS																		
6:00	11:00	5.00			m 2581																	]
11:00 12:30	12:30 23:00	1.50			g. Go ti m 2678			ψ <b>5</b> .				*****************			······································							
23:00	23:30			vice Ri											···						<del></del>	$\dashv$
23:30	6:00	6.50			m 2868	'-2995	'															—
6:00	0:00	0.00																				
		-		···																		
	•	<del>  </del>							<del></del>													
					<del></del>						· · · · · · · · · · · · · · · · · · ·											—
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		Щ																		_		
				111	- 000				-													
		$\vdash$			e 623 g		o col	5 mm	2000	-	12 0-0			n 7	anco pac						·····	<del></del>
			- MARK	- vocal	30 sx	s starc	<del>ս չյել</del> h, 11	sxs f	OWZAN	. 65 s	os mics	. 40 sm	300	a, / exs and a dar fiber	яко рас							
Daily To	otal	24.00								,		,			•							$\dashv$
										C	DST DA	TA										=
													_									

		Eı	nginee	ring	& Suj	pervis	ion		E	XAC	TE	ngin	eer	ing, l	nc.	\$ ./*	1	(918)	599	9400		
Operat	or:	Wolver	ine G&C	Coo	f Utah,	, LLC		D	AIL	Y D	RIL	LIN	GI	REP(	DRT	-		P#	43-(	341-30	031	
DATE	<u> </u>	WELL			4	47.0	CONTR	ACTOR	·	D:-44	^	i		Y, STATE		SPUD DATE	N	ŧ		SUPERVIS		
07/1 DAYS F/ S			OIVERIN			17-2	L		TAL DE	Rig#1		PROGRES		er, UT DRIL	LING TIM	07/02/04 ROP	FC	RMATIC	)N		H. DEPT	
1	2			D	rilling	l			3	,374		37		-	0.50	18.5		Ara	pier			6,600
WT		VIS.	7	NL.	T o	ĸ 1	ен [	SAN	D I	SOLIDS	* 1	PV	DATA	GELS	рертн	DATE/TIME	CHLO	RIDES	T (	CALCIUM	MBT	SALT PPM
8.8	土	39		5.0	2/3		9.0	0.5		1.7		10	13	8/12	3229	7/11 6:00 PM	33,	000	厂	1000		54,450
												BITE									****	
BIT SI	ZE '	VIFG.	TYPE		ADC CODE	SERIAL	NO.		JETS (1	-	$\bot$	N .	out	FOOTAGE	HOUI S	ROP		,	PM +MTR	WOB	T B	CONDITION
1 12-	-	DBS	XL-12	-+-	437	7427		45	0.9	-+-	-	80	1542		29.(0	50.4			/164 /135	42	1,2 1	1/16
2 8-3	1/4"   S	DBS	X5309	+	537	10383	994	15	1	<del>`</del>	15	1542	3374	1832	78.0	23.5 #DIV/0!	$\dashv$	1 33	V 1.33	15/40	H	╂
工	士			土							1					#DIV/0!						
										RAUL								T			PUMP	1400
PUMP NO.	MANU	FACTURE	R LINE		TROKE ENGTH	GAL/STR	SPA	<u>'                                    </u>	GPM	AV DP	AVE	C PUN		MTR DIFF PRESS.		HHP/IN <sup>2</sup>	ECD			30 spm	49spn	100 sp
1		on 600		$\bot$	14	3.8	62		236				T				ļ	_	1	150		1
2 Poth	Wils	on 600	5"	+	14	3.8 7.6	12		232 467	186	25	3 114	-	200		168	8.7	+	2	<u>L</u>	140	<u> </u>
Both	<u> </u>		DRALI	STP	1	7.0	1 12.		<del>70</del> ′ ]	100	1 23	v 1 114	~_1_	GEOL	ogic	100	3.7	+		GENER	AL BAF	0
	WHOLE A	SSEMBLY		<b>V</b> GTH		O.D.		D.	-	ORMATIO	-	MD	Ŧ	'n	70	LITHOLOG	ЭΫ́	1		RiG	info	
Sit				1.0		8.750 6.500	-		1	Arapier Arapier		2,500 2,810		····	182 100	SS 80% SH20% SS 80% SH20%		_	ig No ell No		(012)	5 <b>45-66</b> 7
<i>flotor</i> (* Obl Pin		4)	+	26.44 1.3	_	6.250			<b>T</b>	a capitos	-	۵,010	+	·		GG GG70 GF12G70				OP Test	(5.0)	7/6
donei				31.5	2	6.250		3.00	ВОТ	TOMS UP	TRACE	BG GAS	<u> </u>	GAS L CON	NGAS	TRIPGA	ŝ	EN	ext B	OP Test		7/13
ulsar	. VO			5.8		6.312	<u> </u>	3.00					L	SHO	ws	<u> </u>				afety Me OP Drill	eting	7/11
Float su	ID XU		+-	1.9 8.0		6.375 6.750	-	2.50	-	GAS UNITS	3	FROM	$\top$		0	ROP (FT/A	R()	_		perate P	pe Rar	+
XO				1.2	9	6.250		2.25	0									L	est O	perate B	lind Ra	7/6
20 6" D	С			89.6	_	6.000	<u> </u>	2.25	-				-						ast O	perate A	nnular	7/6
XO Hydrau	ic lar		+-	1.3 32.1	+	6.560	-	2.25	_		$\dashv$		+			<u> </u>		╅				+
хо				2.7	-	6.437		2.25	_		$\Box$											
3 6" DC	;			91.5	_	6.000	-	2.25	4				$\bot$			ļ		4				╂
XO DP	<del></del>		1,	1.8 75.0	+-	6.000 4.500	-	2.25 3.82	-		$\dashv$		+				·····	+			<del>, , , , , , , , , , , , , , , , , , , </del>	+-
Total I	BHA:		<del></del>	71.6		7.000	decisión.															
STRING 105		SHAWT.		20	+	65	ROT.	TORQUE	GR	5,835	ION	GL TO K	35		VATION 347	INTERMEDIAT NA	E CSG	+		CASING 542	•	CASING 600
					<u> </u>		<del></del>			0,000		SUR	ÆYS			<u> </u>						
MD	INCL.	AZIMU			ECTION	N+/S-	E+ /\		DLS	TOOL	M			AZIMUTH		TVD	SECTION		+/8-	E+/W-	DLS 2.56	TOOL
3,044	4.20 2.60	_		-		*****	+		3.08 5.64	MWD	<u> </u>	_		131.80 138.20		3128 3191	64.4 67.9		****		<del></del>	+
-,.00		1										ALYA										
FROM	TO	HRS	<del></del>		HOURS		O) /4	) hhi-	no.	loss)												
6:00 12:00	12:00	-	_		ng 299 ice Ri	95'-30 9	DB (1)	LUUIS	inuo	IUSS)				. <u> </u>					_			
12:30	18:30	_	0	Orillin	ng 300	89'-32																
18:30	21:30	_									pair (	ime on	othe	er. (103	bbls n iud	ioss).						
21:30 22:30	22:30 4:00					r. Worl 44'-33'		oth p	umps						<del></del>							
4:00	6:00	<del></del>						otor a	nd ad	d EMT	tool	instea	d of I	WD.								
		1																				
	<del> </del>	+	+							· · · · · · · · · · · · · · · · · · ·										<del></del>		
		$\pm$	1																			
		1	$\perp$																			
	<u> </u>	+-	+-	r.,	l le se	- 670			~													<del></del>
		+				e 672 e: 88 s		CO (0e	1.3 s	XS CALE	stic s	oda. 1	sx A	sterate	, 3 sxx ar	nco pac	<del></del>				<del></del>	
			工													r, 5 gal defoam	er.					
Daily 1	otal	24.0	ю [																			
												COST	DAT	X .								

		En	gineerii	ng & S	upervis	ion		EX	AC	T Er	ngine	eriı	ng, I	nc.			(9	18) 59	9-9400	·····	
Operat	or:	Walveri	ne G&O'C	o of Uta	n, LLC		D				LING					.,.,	AP	<b>1# 43</b>	041-30	031	
DATE		WELL				CONTR					COL	JNTY, S	STATE		SPUD DATE		AFE		SUPERVI	OR	
07/1			Olverine I		17-2	<u> </u>		DOT F			Se	vier,		LING TIME	07/02/04 ROP		FORM	ATION		H. DEPT	
	1		ari or Estin	Drillin	·g			3,7			339			6.00	21.2			Arapie			6,600
												TA									
WT	$\top$	VIS.	WL			PH	SAN		SOLIDS	*		YP	GELS	DEPTH	DATE/TIME	$\overline{}$	ILORIO		CALCIUM	MBT	SALT PPM
9.1		35	13.0	1 1	/32   1	0.2	0.5	0 1	8.0			11	8/12	3467	7/12 7:00 PM		00,00	0 1	640	1 1	165,000
BIT SI	ZE N	MFG.	TYPE	IADC	SERIAL	NO.		JETS (1/32	nd")		BITDA		OOTAGE	HOUF S	ROP		MTR	RPM	WOB	DULL	CONDITION
1 12-	1/45 6	DBS	XL-12	437	7427	, J		0.96	Τ-	+	80 1	542	1462	29.00	50.4		Y	40/16	+	1.2	
2 8-3		DBS	X530S	537	10383		15	15	19			374	1832	78.CO	23.5		Ÿ	35/13	+	1,2 1	-
3 8-3		DBS	X530S	537	10408	-	15	15	1:		374		339	16.CO	21.2		Ÿ	35/13		177	
										$\Box$					#DIV/0!					$\coprod$	
				········				HYDR	AULK	:5			******			******				PUM	
PUMP NO.	MANUF	ACTURE	LINER	STROKE	1	SPM	9	SPM A	V DP	AV DC	PUMP PRESS.	1	R DIFF RESS.		HHP/N <sup>2</sup>	E	CD	-	30 spm	49spr	n 100 spm
1	Wits	on 600	5"	14	3.8	62	7	36		,								1	150		
2	Wils	on 600	5"	14	3.8	61	2	32										2		140	
Both				<u> </u>	7.6	123	14	67	186	253	1400		200	<u></u>	168	8	.3	<u> </u>			
Projection of the Projection o		SSEMBLY	DRALLS		O.D.	LI LI	0	-	MATION		MO	,	GEOL	OGIC 70	I L/THOLOG	- V			GENER	AL IN	0
Bit	WHOLE A	SSEMBLY	<del></del>	1.00	8.750		<i>J.</i>	1	apien		3,241	$\vdash$	3,2		SS 80% SH20%			Rig N		RW-U	
Motor (	1.5 De	9)	<del></del>	5.48	6.500					工								Cell N		(918)	645-6671
Monel			25	9.81	6.250		3.250			$oldsymbol{\perp}$			GASI	ATA	<u></u>				OP Test		7/6
хо	<del></del>		<del></del>	1.25	6.125		3.250	-	IS UP T	ME	BG GAS	F		GAS	TRAPGA	3			3OP Test		7/13
PWDS GapSu			+	2,81 1.55	6.500		3.500 3.500					<u> </u>	SHO	WS	<u> </u>				Sefety Me SOP Drill	eting	7/11
Float su		<del></del>		3.62	8.375		2.500	-	UNITS	+	FROM	$\vdash$	71	0	ROP (FT/A	R)			Operate F	ioe Ra	+
хо			<del></del>	1.29	6.250	<del>                                     </del>	2.250			1									)perate 6		1
20 6" D	С		589	9.67	6.000		2.250											Last (	perate A	nnuter	7/6
хо			<del></del>	1.34	6.560		2.250					<u> </u>						<u> </u>			1
Hydrau	ic Jar		+	2.18	6.250 6.437		2.250 2.250			+		╀						<del>                                     </del>			
XO 3 6" DC			+	2.73 1.54	6.000	<del></del>	2.250			╅		╁			<del> </del>			<del>                                     </del>			11
XO			<del></del>	1.80	6.000	<del></del>	2.250			+		1			<b>†</b>						1
DP			2,900	0.00	4.500		3.826														
Total I		BHAWT.	3,692 PUW		SO WT.	ROT. TO	1875 W	600	LEVATK		GL TO KB	_	Vecic	VATION	INTERMEDIAT	e cec		- 148	CASING	r oev	TCASING
102	<del></del>	55	130		85	AU1. I	UNGUE		.835		12	$t^-$	5,6		NA NA				542	<del> </del>	600
											SURVE	75									
MD	INCL	AZIMUT		SECTION		E+/W	_	-	OOL	MD	INCL	_	MUTH		TVD	_	TION	N+/S-	E+/W-	DLS	TOOL
3,406	6.20	$\overline{}$		<del></del>	*****	-91.6			MT	3,595		+	3.90		3615	_	.52	****	<del>                                     </del>	2.30	
3,501	3.90	190.0	0 3520	1 02.00	*****	-95.9	<u> </u>	.00   E	MT	3,659	1.80 LY ACT		4.50		3647	0/	.28	1	-37.20	1 2./8	EMT
FRÓM	10	HRS	LAS	T 24 HOUF	₹5:						- 1 AV	1011									
6:00	8:00	<del></del>	1																<del></del>		
8:00	10:00	-			i and m	otor. P	U ne	w BHA				<del></del> -							<del></del>	·	
10:00	11:30	+			motor																
12:00	12:30	<del></del>			ming fro	m 188	9'-19	49'.													
12:30	2:00	1.50																			
2:00	6:00	16.0	Dri	illing 3	374'-37°	3' (Sli	de 14	2'/Rot	ate 19	7') M	ud losse	s 20	to 30	bbls/tr				·	<del></del>		
<b></b>		┼	+					<i>-</i>		· · · · ·	<del></del>										
		1	+																		
		1	1																		
																					]
		1			ge 462						40							ec			
-	-	+	ML	ng nesat											anco pac, 571 r, 72 sxs nutshe						
Daily T	otal	24.0			403	JUN	<del>411, 1</del>	and IR		., <i>, e</i> 2		., 57	3.00 (4		, . L and Intelle	, • }	, C. C				
											COST D/	ΙΤΑ				_					
										`											

		Eng	ineerin	g & S	upervis	ion		EXAC	TE	ngin	eeri	ng, i	nc.				(91	8) 599	9400			
perator:	Wot	verim	<b>G&amp;O</b> Co	of Uta	n, LLC			LYD	RIL	LIN	G F	REP	OR1				API	# 43-0	41-30	031		
	1		encino E	odoral	17.2	CONTRAC		T Dine	10						SPUD DATE		AFE					
rs F/ SPUD			OPERATION	4S		L	TOTAL	EPTH		PROGRES	s	DRa		1	ROP		FORM	ATION				
12	<u> </u>			Drillin	9		<u> </u>	4,100				1	3.50		28.7		<u></u>	Arapien				6,600
WT	VIS.		WL		СК	PH	SAND	SOLID	S %	PV	YP.	GELS	DEPTH		DATE/TIME	G	LORID	ES C	CALCIUM	MBT	s	ALT PPM
9.1	41		9.0	1	/32 9	9.5	0.50	1.9	5	22	26	9/13	3906		7/13 9:00 PM		39,00	0	400	L	1	13,850
SIZE	MFG.	, 1	YPE I	IADC	SERIAL	NO. I	JETS	(1/32nd*)		BITE		FOOTAG	HOU RS	_	ROP		MTR	RPM	WOR	T D	B) C	ONDEDON
42 444	cooc	L.,		CODE	7407			TFA	$\dashv$			ļ	<b> </b>	_	·			RT+MTR		Ţ	В	G
+		+		537		<del></del>			15	1542	3374	<del>}</del>	<del> </del> -	-1			$\overline{}$			+	-	1/16"
8-3/4"	SDBS	X!	530\$	537	10408	376	20	20	20	3374		726	29. i0		24.6		Y	35/135	15/40	Ė		
		<u> </u>			<u> </u>					1		<u> </u>	<u></u> _		#DIV/0!					<u>_</u>		<u> </u>
MP MAN	UFACTU	RER	LINER S	TROKE	GAL/STK	SPM	GPM			C PU	MP N	TR DIFF	<del></del> -	۲	HP / IN <sup>2</sup>	E	CD.					100 spr
		_						<del> </del>		PRE	SS.	PRESS.	<u> </u>							T		
<del></del>			5"	14	3.8	62	236	<del> </del>	+	-	+		<del> </del> -					2		十		<b></b> -
		1			7.6	123	467	186	25	3 12	00	200		_	168	9	.3					L
	Yeer				05			CANO	~					_					·			
/ I OMHOLE	ASSEM!	*'			8.750	I.D.	_							1		f		Rig No:	RIG	INFO		· · · · · ·
		$\Box$		-	6.500		T		$\Box$		$\perp$			1				Cell No.		(91	8) 6	
nel & Pon	ny Colle	BAT			6.250									_								7/13
//D Sub		$\dashv$		+	6.125			TOMSUF	TME	eg ga	-			1	TRIP GAS					eting		7/13
				+	6.500	<del></del>		GAS UNIT	3	FROM				7	ROP (FT#H	R)						7/13
at sub/SS	<u>`</u>	-		_	6.375						+			4						*****	_	
5" DC		1		+	6.000				$\dashv$		+			+								7/6
***********		$\dashv$	1.3	4	6.560						工			1								
raulic Jar	<u> </u>	$\dashv$			6.250			<del> </del>			+			4								<b> </b> -
'DC		$\dashv$			6.000				$\dashv$		+			+			-				-	
			1.8	10	6.000	2	250				工			1								
March   Marc																						
NG WT.			PUWT.			ROT. TO	QUE G	RD. ELEVA	TION		8			#	NTERMEDIATE	CSG						
105	55		130	<u> </u>	85	L		5,835			ᆜ	5,8	347		NA NA			15	42	L	66	<del>5</del> 00
INCL	. AZW	алн				E+/W-	DLS	TOOL	MD			ZUMUTH			TVO ]	SEC				_	LS	TOOL
		_						<del></del>		_										_		
2 3.90	0   100	J.004	3800   8	2.17	-142.09	-87.03	2.41	EMI							4018	93	.41	-134.47	-67.73	14.	/5	EMI
		_					200						<del></del>									
						(rotate	39')						<del></del>									
DO I7∹3⊻		_				' (Slid 6	27 Rot	ate 152	') muc	d losse	s upto	40 bb	s/hr									
	nl i	_			regain s	ignal or	EMT	ool. Fa	iled			····										
30 15:0 :00 16:0	_	: M )   E			mps on	EMT. P	) pony	monel							<del></del>			<del></del>				
30 15:0 00 16:0 00 19:0	0 3.0		incre		- F - O.																	
March   Marc																						
0 15:0 00 16:0 00 19:0 00 21:0 00 1:00	00 3.0 00 2.0 0 4.0	00	TH	ng 39	66'-4100	' (Slide	107110										·····					
30 15:0 00 16:0 00 19:0 00 21:0	00 3.0 00 2.0 0 4.0	00	TH	ng 39	66'-4100	(Slide																
00 15:0 00 16:0 00 19:0 00 21:0 00 1:00	00 3.0 00 2.0 0 4.0	00	TH	ng 390	66'-4100	' (Slide							········									
30 15:0 00 16:0 00 19:0 00 21:0	00 3.0 00 2.0 0 4.0	00	TH	ng 390	66'-4100	' (Slide																
30 15:0 00 16:0 00 19:0 00 21:0	00 3.0 00 2.0 0 4.0	00	TH	ng 390	66'-4100	' (Slide																
30 15:0 00 16:0 00 19:0 00 21:0 00 1:00	00 3.0 00 2.0 0 4.0	00	THI	Usaç	e 542 ga	ıls																
30 15:0 00 16:0 00 19:0 00 21:0 00 1:00	00 3.0 00 2.0 0 4.0	00	THI	Usaç	e 542 ga	ils s anco	gel, 4 s							_				<u> </u>				
15:00 16:00 19:00 21:00 1:00 1:00 1:00	00 3.00 2.00 0 4.00 5.00 5.00 5.00 5.00 5.00 5.00	00 00 00	THI	Usaç	e 542 ga	ils s anco	gel, 4 s							_				<u> </u>	ner, 1 d	rum	CI3	00.

		£	Engi	ineeri	ng & S	Supervi	ion		EX	AC'	T E	ngir	100	ring,	In	IC.			(8	118) 5	99-	9400			
Operat	or:	Wolve	rine	<b>G80</b> C	o of Ut	m, LLC		D7	<b>AIL</b> I	/ D	RIL	LIP	<b>VG</b>	REF	<b>&gt;</b> C	R1		·	AF	<b>*#</b> 4	3-0	41-30	)31		
DATE		WELL					CONT	RACTOR					COUN	ITY, STATI			SPUD DATE		AFÉ			SUPERVIS			
07/1				PERATIC	Federa	17-2	<u> </u>		DOT F			ROGRE		ier, UT		ING TIN E	07/02/04 ROP		Ene	MATION			avid	Spitz	
1:		1		<i>J</i> <b>L</b> J <b>C</b> · · · · ·	Drillin	ng		"	4,8		ľ		67	"		1.00	36.5			Ara					600
												MUD	DAT	X .											
WT	$\Box$	VIS.	T	WL		СК	PH	SAN	-	SOLIDS	*	PV	ΥP	_	-	DEP 1H	DATE/TIME	-	HLOR		-	ALCIUM	MEST	SALT	
9.5		39		14.0	<u> </u>	1/32	7.0	0.5	<u> </u>	2.5		11	16		2	44:9	7/14 7:00 PM		01,0	000	<u></u>	1360		166,	650
BYT SIZ	E I N	AFG.	TY.	/PE	IADC	SÉRIA	NO.		ETS (1/3)	2nd")	<del>- 1</del>	BIT	DATA	<u>-                                      </u>	G.	HOU ES	ROP		MTF	R	M	WOB	ĐÚ	L COND	MON
NO.					CODE	<del> </del>		ļ	or TFA	-T	-		-	-	+				Ļ	+	MTR			В	G
1 12-1		DBS	-	12 30S	437 537	1038		15	0.96		5	80 1542	154 337	_	-	29.00 78.00	50.4 23.5		Y	35/	164 135	42 15/40	1,2 4.5	#1	/16
3 8-3		DBS		308	537	1040		20	20	1 2		3374	1	149	-+	50.50	29.6		Ÿ	+	135	15/40		1	
										I					I		#DIV/0!								
									HYDR	AULK	:\$											SLOW			
PUMP NO.	MANUF	ACTURE	R	LINER	STROKE	GAL/ST	SF	<b>M</b> G	PM /	AV DP	AVD		UMP ESS.	MTR DIF	F		HHP/IN <sup>2</sup>	E	CD		$\Box$	30 spm	498	om 10	0 sç
1	Wils	on 600	<u>.</u> †	5"	14	3.8	6	2 2	36						T							150		上	
2	Wils	on 600	1	5"	14	3.8	6	1 2	32			T			I						2		16	0	
Both			$\bot$			7.6	12	3 4	67	186	253	3 1:	200	200	$\perp$		168	ي	9.9						
BOTTON	eno e .	0001		LENGT	TRING	O.D.	_	(.D.	E940	MATIC		W.C		GE	)LC	GIC _	( LMHOLOG					GENER	AL IN	FO	
BOTTON	WALL A	oce <b>MS</b> L	+		.00	8.75	1	1.U.		apier		4,70			4,68		Mostly Salt			Ria	No:	rus.			
Motor (1	.5 De	9)			.48	6.50	-				士									- T	l No.		(918	645	667
8 lenot	Pony	Collar	I	39	.11	6.25		3.250	•		$\Box$				30/					-		P Test		_	7/13
KO			4		.25	6.12	+	3.250	вотто	MS UP	TRAE	BG G	AS	o c	NN	GAS	TREP GA	\$		-		P Test		-	7/20
PWD S	-		+		.81 .55	6.50 6.50	+	3,500			L			5	HOW		<u> </u>			-		fety Mee P Drill	ting		7/13 7/13
Gasp Su Floet su			+		.62	6.37	+-	2.500	GA	SUNTS	-	FRO	w		TO		ROP (FT/H	PR)		-		erate Pi	oe Ra		7/13
XO			十		.29	6.25	-	2.250	<b>!</b>		十									-		erate Bi			7/13
20 6" D	С		工	589	.67	6.00	9	2.250												Las	t Op	erate Ar	nula		7/6
хо					.34	6.56		2.250			$\bot$						ļ			<b> </b>					
Hydraul	ic Jar		+		.18	6.25	<del></del>	2.250	<b>!</b>		-						<u> </u>			<b>!</b>				-	
XO 3 6" DC	:		+		.73	6.43	+	2.250			-+		-+	····						$\vdash$	· · · · ·			+	
XO.			$\top$		.80	6.00	+	2.250																	
DP				4,070	.00	4.50		3.826																	
Total E		BFA WT	$\bot$	4,871		SO WT.	1	TORQUE	CEPO	ELEVAT	- L	GL TO	KB	KB (	FIEV	ATION	INTERMEDIAT	FCSC		Ļ.,	AST	ASING	1 N	EXT CAS	ang.
116		55	+	150		98	1	1011101		5,835		12			5,84		NA.			1		42		6600	)
												SUR	VEY	5											
MO	INCL	AZIMA			SECTION		E+			TOOL	MD		VCL.	AZIMUTI			TVD		CTION	-	/8-	E+/W-	D		TOOL
4,124	2.00 1.80	8.1 149.	_			-129.6 -127.2	-		<del></del>	emt Emt	4,49		.20	81.70 81.70	_		4478 4757		2.47 1.59	+	9.90 8.77	-60.14 -52.68	+-	-+-	EMT
+,303	1.00	1143.	~·	-7£30	55.07	1-121.2		3	·~' I .'			ALY					-,,,			1-,4,				·	
FROM	70	HR	6 T		24 HOUR																				
6:00	10:00	-	-			100'-419	<del></del>															······································			
10:00 11:30	11:30 18:00		_			lig. Wor 193'-431						200	0' hh	<u> </u>		<del></del>									
18:00	19:00	+	_			tig. Rep																<del></del>			
19:00	3:30	8.5				316'-474						bis													
3:30	4:00	0.5	0		vice F	_ X																			
4:00	6:00	2.0	0	Dril	lling 47	749'-486	7' rota	ate all.		· ·						<del></del>						<del></del>			
		+	+		<del></del>						<del></del>					····									
		T	+							*						*****	<del></del>								
			丁																						
			$\perp$																						
			4																						
		┼	+	F	al Usc	700	ole										<del></del>					<del></del>			
		+	+			ge 798 g se: 50 so		n gel	6 sys 4	Caust	ic so	da 4	SXS S	anco n		23 s.cs S	ialt Gel								•
		1	+	ww	- 430									_			30 sxs nutshel	l							_
		1-	∞ <b>†</b>																						

PROT NATA

		E	ngine	erin	g & S	upervis	ion							ring, l			_	(91	8) 599	9400		_	
Operat	or:	Wolve	ine Gi	O Co	of Uta	h, LLC				Y D	RIL	LIN		REP	ORT			<b>\P</b>	# 43-0				
07/1	6/04	WELL	Volveri	na E	orloral	17_9	CONT	RACTOR		Rig#1	n			TY, STATE IET, UT		9PUD DATE 07/02/04		VFE.		SUPERVI		Spitz	,
DAYS F/S			ENT OPE	RATION	NS		1		OTAL DE	PTH		PROGRE	33	DRI	LING TIME	ROP	- F	ORM	ATION		TH. DE	PTH	
1	4	<u> </u>			Drillin	9			4	,950		7			3.00	24.7			Arapien			6	,600
WY		VIS.	1	WŁ	<del></del>	СК	PH ]	SA	ND	SOLIDE	*	PV	DAT/	GELS	DEP H	DATE/TIME	CHL	ORID	ES I	CALCIUM	MBT	SAL	r PPM
9.3	I	38		8.8	1	/32	9.0	t	r	1.5		13	15	7/9	4867	7/15 7:00 PM	93	3,000	)	980		153	,450
ert] si		VIFG.	TYPE		IADC	SERIAL	W 1		ue to //	/32nd*)		BITE	ATA	FOOTAG	HOURS	ROP		VITR I	RPM	WOB	Linu	LL CON	amai.
NO.			<del></del>	_	CODE				or]		_			10012	10013				RT+MTR		Ŧ	В	G
1 12-		DBS DBS	XL-12 X530	-	437 537	7427 10383		15	0.		15	80 1542	154 337		29.00 78.00	50.4 23.5		Ÿ	40/164 35/135	15/40	1,2 4,5	1	1/16
2   8-3 3   8-3		DBS	X530	-	537	10408		15 20			20	3374	337	1567	53.50	29.3	-+	┆	35/135	15/40	1.3	+	
				士												#DIV/0!						工	
										RAULK							~~~			SLOW			
PUMP NO.	MANU	FACTURE	RLIN		ENGTH	GAL/STK	SPI	۳	GPM	AV DP	AVE	C PU		MTR DIFF PRESS.		HHP/IN <sup>2</sup>	ECT	,	-	30 spri	499	pm 1	00 sp
1	Wils	on 600	5		14	3.8	73		277				$\Box$						1	150			
2	Wils	on 600	5	`- -	14	3.8	75		285		<u> </u>		_				<del> </del>		2	<u> </u>	10	60	
Both			100		RING	7.6	14	<u> </u>	562	186	25	3   14	90	200 GEOL		168	9.6	_		GENER	AI P	EA	
вотто	AHOLE A	SSEMBLY		NGTH		Q.D.		I.Ď.	+	ORMATIO	N	MD			VO.	LITHOLOG	ĠΥ				NFO		
Bit			+	1.0	+	8.750	<del> </del>		1-	Arapier	1	4,70	<u>•</u>	4,0	586	Mostly Salt		4	Rig No:			<b>.</b>	
<b>Motor (</b> ' <b>Monel</b> &			+	26.4 39.1	_	6.500	+	3.25			-		$\dashv$			<b></b>			Cell No Last BC		(91	3) 645	7/13
XO			士	1.2	+-	6.125	<del> </del>	3.25	1-	TOMS UP	TIME	BG GA	s I	GAS1 CON	NGAS	TRIPGA	s		Next B			_	7/20
PWD S	ub			2,8	+-	6.500		3.50	-					SHO						fety Me	eting		7/13
Gap Su				4.5	_	6.500	<u> </u>	3.50	-	GAS UNITE	3	FROM	Ŧ		0	ROP (FTA	IR)	7	Last BC		P		7/13 7/13
Floet su XO	10/55		+-	8.6 1.2	_	6.375 6.250	<del>1</del>	2.50	-	·	-1		$\dashv$			<del> </del>		-1		erate B		-	7/13
20 6" D	C			589.6	<del></del>	6.000		2.25	-	<del></del>			工							erate A			7/6
XO				1.3		6.560		2.25	-		_		$\perp$									-	
H <b>ydra</b> u XO	ic Jar		+	32.1 2.7		6.250 6.437	<b> </b>	2.25 2.25	-	······	$\dashv$		$\dashv$					-				+	
3 6" DC			+-	91.5	_	6.000		2.25	_		一		_			<b></b>						1	
хо				1.8	90	6.000		2.25	9														
DP			<del></del>	070.0		4.500		3.82	6		$\dashv$		-			ļ						-	
Total E		BHAWT.		871.5 JWT.	×6	SOWT.	ROT.	TORQU	E GR	D. ELEVAT	TON	GL TO	KOB	KB EL	VATION	INTERMEDIAT	E CSG		LAST	CASING	, ,	EXTCA	SING
120		55		160		98	<u> </u>			5,835		12		5,	347	NA NA			15	42	1	660	0
MD	INCL	AZIMU	TH TV	n Is	ECTION	N+/S-	E+/	w. T	1st DLS	and Zn	J SU		_	AZIMUTH	iring triol	TVÐ	SECTI	ON I	N+/S-	E+/W-	DI	šΙ	TOOL
4,400	2.10	_	_		90.83	-129.23	1	-	1.18	WST	4,8		90	333.40		4816	55.2		-95.88	-75.29	_	_	WST
4,665	6.30	335.3	30 46	51 (	80.18	-118.33	-64.	39	3.37	WST	4,8		<del>,                                    </del>	333.70	<u> </u>	4871	44.4	11	-86.20	-80.13	0.	24	WST
FROM	70	HRS	_	AST 2	4 HOUR:	S:					D	ALYA	CTN	TTY									
6:00	11:00	<del></del>		ТОН	. EMT	Tool ba				to run v	wireli	ne ste	erab	le tool.									
11:00	1:00					ools. RU	wet o	conne	ct.							······································	····			<del></del>			
1:00	1:30 6:00	_	_	Serv TIH	rice R	g													·· ·· · · ·				
6:00	1:00	-	_		steerir	ng tool, v	vet co	nnec	t & pa	ackoff													
1:00	3:30	+		Dritti	ng (48	376'-493	9') Ro	tate	63' S	leering	tool	shortir	ng ou	rt.									
3:30	5:30					d down 1					·	n to 21	) hh!	e/h-					·				
5:30	6:00	0.50	Ή-	(ווחט	iig (4)	939'-495	U) K	Adle .	1 1 M	<b>JU 105</b> 5	903 Z	U (U 3	v oot	S/III		1.10.1							
			工																				
		+	+													<del> </del>							
		+-	+												<del></del>								
		1	士															_					
				Mud	usag											Salt Gel, 6 sxs I	****						
<u></u>	nte!	124	+			16 sx	s star	ch, 3	sxs f	owzan	, 20 :	sxs mi	ca, 1	4 sxs ce	dar fit er,	51 sxs nutshel	it.						
Daily T	JUNE	24.0	<u> </u>																				

TOTAL TA

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		En	gineeri	ng & S	upervisi	ion	ı	EXAC'	TEn	nginee	erin	g, Ir	1C.			(91	18) 599-	9400			
Operat	OF:	Walvert	10 G&O (	o of Uta	th LLC	****	DAI	LY D	RIL	LING	R	EPC	DRT			API	# 43-0	41-30	031		
DATE	<del>~.</del>	WELL			.,	CONTRAC					JNTY, S			SPUD DATE		AFE		SUPERVI	OR		
07/1			viverine		17-2	<u> </u>		T Rig#1			vier,		LING TIME	07/02/04		F000	IATION		avid	Spit	<u>z</u>
DAYS F/S		PRESEN	T OPERATI	ons Drillin	20		TOTAL	5.255	ľ	ROGRESS 305			7.50	17.4			Arapier	1	*FR. LA		6,600
	<u> </u>	<u> </u>		Dimi	· · · · ·		<u> </u>	3,233		UD DA	71						7 d d p 1 0 1				-,000
WT		VIS.	WL		ox I	PH	SAND	SOLIDS	*			GELS	DEP'H	DATE/TIME	C	HLORIO	ES	CALCIUM	МӨТ	SAI	T PPM
9.6		34	13.6	1	1/32 E	3.8	0.00	2.0		7	9	5/7	5148	7/16 7:00 PM	1	21,00	00	1380		19	9,650
										BIT DAT											
BIT SC NO.	ZE N	FG.	TYPE	IADC CODE	SERIALI	NO.		S (1/32nd") or TFA		N O	OUT FO	OOTAG	HOURS	ROP		MTR	RPM RT+MTR	WOB	F	ELL CO	IDITION G
1 12-	1/41 SI	DBS	XL-12	437	74278	35		0.96		80 1	542	1462	29.00	50.4		Y	40/164	42	1,2	1	1/16"
2 8-3	/4" SI	DBS 7	(530\$	537	103839	994	15	15 1	15	1542 33	374	1832	78.00	23.5		Υ	35/135	15/40	4,5	1	1
3 8-3	/4" SI	DBS 2	(530\$	537	104088	376	20	20 2	20 3	3374		1872	71.00	26.4		Y	35/135	15/40	$oldsymbol{ol}}}}}}}}}}}}}}$	Ц	
								1_					L	#DIV/0!			<u> </u>	<u> </u>	_		
								DRAULK										SLOW			
PUMP	MANUF	ACTURER	LINER	STROKE LENGTH	GAL/STK	SPM	GPM	AV OP	AVDO	PRESS		R ONFF RESS.		HHP/IN <sup>2</sup>	E	CD	▎├	30 spm	49	spm	100 spm
NO.	Wile	on 600	5"	14	3.8	73	277	<del> </del>	<del>                                     </del>	T READ	† · · · ·				$\vdash$		1	150	1		
2		on 600	5"	14	3.8	75	285		1		$\vdash$						2		1	B0	
Both					7.6	148	562	186	253	1490	2	200		168	8	9.6					
			DRILL S	TRUNG	1							GEOL	ogic -					GENER		NFO.	
	WHOLE A	SSEMBLY	LENG		O.D.	I.D.	$\dashv$	FORMATIO		MD			VD O	ПДНОГОС	3 <b>Y</b>	$\Box$	D: - :		INFO		
Bit			-	1.00	8.750	<del> </del>	$\dashv$	Arapiei	<u> </u>	4,700	┼	4,6	386	Mostly Salt			Rig No		(04	O\ 64	E 6674
Motor (			<del> </del>	3.48	6.500 6.250		250		+		╁						Cell No	OP Test	(91	<del>3,34</del>	5-6671 7/13
Monel 8	& Pony	Collar	1	3.11 1.25	6.250	<del> </del>					<u> </u>	GASI	NGAS	I TROP GA				OP Test		_	7/20
XO PWD S	arb.		<del></del>	2,81	6.500	<del>                                     </del>	.230 B	OTTOMS UP	TRAFE	BG GAS	<del>                                     </del>	CON	N GAS	I Har GA	3			efety Me	priite	一	7/15
Gap Su			+	.55	6.500		.500	GAS UNIT	8 1	FROM	<del></del>	SHO	Ws	ROP (FT/A	R)			OP Drill			7/13
Float sa			<del></del>	3.62	6.375		.500	G-S Oran	<u>*</u> †	TICOM	T	<u></u>					Last O	perate P	pe F	ams	7/13
хо				1.29	6.250	2	.250										Last O	perate B	lind f	(am	7/13
20 6° D	С		589	9.67	6.000	2	.250										Last O	perate A	nnut	*	7/6
хо				1.34	6.560	2	.250		$\perp$		1_									_	
Hydrau	lic Jar		32	2.18	6.250	-	.250				↓_										
xo			+	2.73	6.437		.250				╁—			<b></b>						-	
3 6" DC	<del>}</del>		<del>                                     </del>	1.54	6.000	<del></del>	.250		$\dashv$		<del> </del>			<del> </del>						$\dashv$	
XO DP			4,45	1.80	6.000 4.500		.826		+		╁			<del> </del>	<del>,</del>		<del>                                     </del>			_	·········
Total	DLIA-		5.25		4.500		.020		-		$\dagger$			<u> </u>			<b>i</b>				
STRING		BHAWT.	PUW		SO WT.	ROT. 10	ROUE	GRO. ELEVA	TION	GL TO KB	#	KB ELE	VATION	INTERMEDIAT	E CSG			CASING	T		ASING
129		55	200	<u> </u>	70	<u> </u>		5,835		12	<u>i</u>	5,0	847	NA NA			1 1	542	L	66	00
										SURVE											TOOL
MD 4 OF 4	10.50	335.2		32.58		E+/W-	DLS 1.01		MD 5,11	_		MUTH 5.60	<del></del>	TVD 5090	1	.43	-50.62	-96.05	_	18	WST
4,951 5,046		+	5026	+		<del></del>	<del></del>			5 5.70		38.50	<del>                                     </del>	5184	<del>                                     </del>	7.69	-37.69		+	.77	WST
3,540	, 5.40	1004.5	1 0020	, .5.55	, 50.01	,	1	,	A	MEYACT											
FROM	70	HRS	LAG	T 24 HOUF	<b>18</b> :																
6:00	7:30	1.50			950'-500				'												<del></del>
7:30	10:00				reline ste																
10:00		+			005'-503		ne 15',	, Sinde 24	4.												
12:30		-			rig pump 6039'-514		ofe 27	ه حاناء ه	יחי									<del></del>			
14:30		_	1		rig pump		atc 2/	, SHUE 0													
20:00 21:30					reline ste		GUÉDAY	ent.										····			
22:00	6:00				146'-525				7'. Mu	d losses	20 t	oph									
	T	1	† <u></u>																		
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<b> </b>	<del>                                     </del>	+	M	ud usa	ge: 7 sxs	anco g	el, 2 so	cs causti	c sod	a, J sxs	anco	pac,	1 SXS De	sco, 1 anco dri	11, T )	xcide	iherali	amer, 1	UI:	NUA	
	<u> </u>	124.55			19 \$X	s starci	, 4 SX	s nowzar	ı, ZD S	sks mica	, 20 8	axs CE	Jer II Jer	, 5 sxs nutshell	, ZU	SAS T	wer pru	<u>v.                                    </u>			
Daily 1	Otal	24.00	<u>'</u>							<del></del>											

PART HATA

		Eng	ineeri	ng & S	upervisi	on		EXA	CT	Eng	ginee	ring, l	nc.			(91	8) 599-	9400		
perat	or: V	Volverim	<b>G&amp;O</b> C	o of Uta	h, LLC		DA	ILY	DR	ILL	.ING	REP	ORT	~		AP	# 43-0	41-300	)31	
ATE		WELL				CONTRAC	TOR				cou	NTY, STATE		SPUD DATE	1	AFÉ		SUPERVIS		
07/1			VERINE I		17-2	Ĺ		DT Rig	#10	Topo	Ser GRESS	vier, UT	LING TIM	07/02/04 ROP		FORM	ATION		avid S	
AYS F/ SI	į.	PRESENT	OPERAIK	TOH	1		IOIA	5,435	5		180	1	2.00	15.0			Arapien			6,600
	<u> </u>										UD DAT	<u>,                                     </u>			·····					
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9.5		35	8.0	1	/32 1	1.0	tr		2.0	نسب	0 7		5400	7/17 7:00 PM	10	1,00	0	320		166,650
at Siz	ZE I MF	c .	YPE	IADC	SERIAL N	40 T	Æ	TS (1/32nd	<u>,                                     </u>		AT DAT	T FOOTAGE	Hours	ROP		MIR	RPM	WOB	DUL	CONDITION
NT SIZ				CODE				or TFA		_					-	_	RT+MTR		+-+	B G
<del></del>	1/4" SD		L-12	437	74278		_	0.96		<del></del>		42 1462	29.00	50.4	$\dashv$	Ÿ	40/164 35/135	15/40	1	1 1/16
2 8-3			530\$	537	103839		20	15 20	15 20	-		74 1832 35 2061	78.00 83.00	23.5 24.8	-+	᠅	35/135	15/40	<del>[ ]</del>	<del>`</del>
3 8-3	V4" SD	BS X	530\$	537	104088	3/6	20	20	20	+*	7- 3-	35   2061	33.(4)	#DIV/0!	一		337,00	10.40	T	1
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PUMP	MANUFA	CTURER	LINER	STROKE	GAL/STK	SPM	GPI	M AV	DP	AV DC	PUMP	MITR DIFF		HHP/IN <sup>2</sup>	EC	œ.		30 spm	49sp	m 100 sp
NO.				LENGTH		77	-	<del>,   -</del>	+		PRESS.	PRESS.	<del> </del> -		-		1	150	╂──	+
1 2	Wilso		5" 5"	14	3.8 3.8	73 75	27	<del></del>	十		<del>                                     </del>	<del>                                     </del>	<del> </del>		-	$\neg$	2	1.55	160	5
Both	VVRSO	11 000	- 3		7.6	148	56		十		<b></b>	<b>1</b>	<u> </u>							
			WILL'S	TRING								GEOL	OGIC					GENER		-0
вотто	MHOLE AS	SEMBLY	LENGT	н	O.D.	LD.	#	FORM		7	MD	<del></del>	V0	LITHOLOG			Di- No		INFO	
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				-		<del> </del>				十		<del> </del>		ANETT 10-40%				OP Test	(3.0	7/13
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Total I		HAWT.	PUW	).00 T	SOWT.	ROT. TO	KQUE	GRO. EL	EVATIO	N C	токв	KBEL	EVATION	INTERMEDIAT	E CSG		LAST	CASING	N	XI CASING
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MD 5 269	3.70	355.90	TVD 5246	-12.91		E+/W-	4.9		OL ST	мо 5, <b>36</b> 3	3.60	_	<del>                                     </del>	5341	1	2.59	-33.03			
		182.80		-13.90	+		+	-	_	5,395		·		5373	-10	).84	-35.20	-101.5	0 2.7	2 WS
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	1.80					1 1001					LIACI	WITY								
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5,330 FROM 6:00	9:00	3.00	LAS Dr	illing (5	** 255'-530	18')	CH LİPON	nent				WIIY								
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5,330 FROM 6:00 9:00 12:30 15:00 23:30	9:00 12:00 12:30 15:00 23:30 0:30	3.00 3.00 0.50 2.50 8.50 1.00	Dri Re Dri Cii	illing (5 spair wi illing (5 spair wi illing (5 rc hole OH.	is: 1255'-530 reline sta 1308'-531 reline sta 1314'-543	18') seering e 14') seering e 15'). TD	quipn	nent. mediati		e. Sli	de last	20'. Hole			Apr. 4.			real To-		200 2 h
5,330 FROM 6:00 9:00 12:30 15:00 23:30	9:00 12:00 12:30 15:00 23:30 0:30	3.00 3.00 0.50 2.50 8.50 1.00	Dri Re Dri Cii	illing (5 spair wi illing (5 spair wi illing (5 rc hole OH.	ss 255'-530 reline sta 308'-531 reline sta 314'-543	88') seering e 4') seering e 55'). TD	geipn interr	ment. mediatr	caus	e. Sli	de last	20'. Hole	ac, 4 ance	o drill, 1 defoarr	ner, 1	66 s	ous saft	gel, Tor	que e	ase 2 bb

POST DATA

		EI	ngineeri	ing & S	Supervi	sion		EX	AC	TE	ngin	eeri	ng, lı	nc.			(91	8) 599-	9400		
Operati	or:	Wolver	ne G&O (	Co of Uta	nh, U.C		_D7						REP(				API	# 43-0	41-30	031	
DATE	<del></del>	WELL.				CONT	ACTOR					COUNTY	STATE		SPUD DATE		AFE		SUPERVI		_:4_
07/19			Olverine NT OPERATI		17-2	1		DDT F		<u>U</u>	PROGRE	Sevie		LING TIN E	07/02/04 ROP	$\dashv$	FORM	ATION		TH. DEPT	
. 1	7	<u>L</u>		Loggi	ng			5,4	35		(			0.00	#DfV/0!			Arapien		,	6,600
WT	7	VIS.	WL		ск	PH	SAND	<b>)</b>	SOLIDS	× 1	PV	DATA	GELS	DEPTH	DATE/TIME	СН	LORID	ES	CALCIUM	MBT	SALT PPM
9.5	工	35	8.0		/32	11.0	tr	工	2.0		10	7	4/5	54(10	7/17 7:00 PM	10	01,00	ю	320		166,650
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BIT SIZ NO.	<u> </u>	FG.	TYPE	CODE				or TFA	_	_		ļ				_		RT+MTR		T B	G
1 12-1 2 8-3		DBS DBS	XL-12 X530S	437 537	1038		15	0.96 15	+	5	80 1542	1542 3374	1462	29. )0 78. )0	50.4 23.5		Y	40/164 35/135	15/40	1,2 1	-
3 8-3		_	X530S	537	1040		20	20	+-	20	3374	5435	2061	83.10	24.8	$\dashv$	Ÿ	35/135	15/40	f 7	
	工														#DIV/0!					Ш	
					· · · · · · · · · · · · · · · · · · ·			HYDR/												PUMP	
PUMP NO.	MANUF	ACTURER	LINER	STROKE LENGTH	GAL/STI	SPI	1 6	PM /	V DP	AV			TTR DIFF PRESS.		HHP/IN <sup>2</sup>	EC	20		30 spn	4880	100 spm
1		on 600	5"	14														1	150	<b> </b>	<b>-</b>
2	Wils	on 600	5"	14	-	╂	+	-+		-	$\dashv$	-			<del>,</del>	╂	$\dashv$	2	L	160	
Both			DRILLS	]	<u> </u>	<u> </u>							GEOL			<u> </u>			GENER	AL IN-	
BOTTO	HOLE A	SSEMBLY	LENG		O.D.	<b>T</b>	D.	FOF	MATIO	N ]	MO	7		vo	LITHOLO	ĞΥ				NFO .	
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			+	-		+-		<b>-</b>		$\dashv$		+	<del></del>		<b> </b>		-	Cell No Last B0		(212)	7/13
			1					BOTTO	MS UP	TOME	BG G	S	GAS I	NGAS	TRIPGA	s	$\equiv$	Next B	OP Test		7/20
													SHO	ws					fety Me	eting	7/15
			┼	-		+		GA	S UNIT:	S	FRO		7	0	ROP (FT#	<del>(</del> R)		Last BO	P Drill perate P	ine Ran	7/13
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			<b>†</b>			1															
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Total E		BHA WT.	PUW	0.00	SOWT.	ROT.	TORQUE	GRD.	LEVA	ION	GLTO	KB	KB ELE	VATION	INTERMEDIA	IE CSG			CASING	<del></del>	TCASING
	<u></u>		<u> </u>			<u> </u>			,835	ا	12		5,0	847	NA NA		_	1:	342	1 '	600
MD	INCL.	AZIMUT	H TVD	SECTION	N+/S-	E+ (	W- E	ı.s	TOOL	M		CL A	ZIMUTH		TVD	SEC	TION	N+/S-	E+ / W-	DLS	TOOL
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	L_							<u></u>		<u>L</u>			1	<u> </u>	<u> </u>
FROM	70	HAS	LAS	T 24 HOUR	is:						DALY	CTIVI	Y								
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9:00	11:00	_		H to 14		inc to	ulo .						<del></del>								
11:00 13:00			_		ne steer ig. Clear		ло. 														
17:30			TII	H. Rea	m 90' to	bottor															
23:30	23:00	<del></del>			and cor										- <del></del> -					-	
23:00 4:00	4:00 4:30				ogs. (60 hole k	-		rag of	bott	om)		<u></u>					···				
4:00	6:00			gging.	IN DRU K	A4A	III.														
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Daily T		23.0	<del>                                     </del>		10 s	xs sta	UN, 1(	)/ SXS	mica	s, 43	SXS C	oar N	Jei, 27	sxs nutsh	rçii.						
			- I																		

			En	gineeri	ing & S	Supervis	ion		EX	AC	TE	ngir	100	ring	, In	1C.			(91	18) 599-	9400		
	rator:			10 G&O C	o of Ut	m, LLC			<b>VILY</b>	/ D	RI	LLIP				)R1			VPI	# 43-0	41-30	031	
DATE	7/20/0		VELL	alverine	Forters	i 17.2	CONTR		DDT F	المادنة	Λ		1	ity, stat ier, U			SPU0 DATE 07/02/04	^	Æ		SUPERVI	or avid Sp	
	F/ SPUD			T OPERATI	ONS		1		AL DEPT	н	J	PROGRE	SS		DRILL	ING TRIE	ROP	FC	ORM	ATION	AU AU	H. DEPTH	
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BIT	SIZE	MFC	i. 1	TYPE	IADC	I SERIAL	NO.		ETS (1/32	pd")		BIT	DATA OU	<u> </u>	ACS	HOU RS	ROP	1.0	rik i	RPM	Wos	I NULL C	ONDITION
NO.				W 40	CODE				or TFA	<u></u>			_	┩	4	<del></del>			_	RT+MTR	<u> </u>	TΒ	G
$\vdash$	2-1/4° 8-3/4"	SDE	<del></del>	KL-12 (530S	437 537	7427 10383	-	15	0.96 15	+	5	80 1542	154 337		-	29.00 78.00	50.4 23.5		Y	40/164 35/135	15/40	1,2 1	1/16"
-	8-3/4"	SDE		5308	537	10408		20	20	-	0	3374	543		-+	83.00	24.8		Ÿ	35/135	15/40	6,7 1	<u> </u>
					<u> </u>	<u> </u>			<u> </u>					$\perp$	$\Box$		#DIV/0!				L		
PUN	o I w	NUFAC	TI IDED	LINER	STROKE	GAL/STK	SPW		HYDRA PM A	V DP	<b>S</b>	or I a	JMP	MTR OI	- T		HH4P / IN <sup>2</sup>	ECD			SLOW 30 spm		100 spm
NC					LENGTH							4	ESS.	PRESS						止	30 spin	4000111	100 spin
1 2		Vilson Vilson		5* 5*	14		├	+-					$\dashv$	· · · · · · · · · · · · · · · · · · ·	+			<b> </b>	_	1	150	400	
Bo	-	VIISOT	000		14	<b></b>	$ar{}$	+				$\dashv$	十		+			ļ		2	L	160	L
				DRILL S	TRUNG									GE	otto	XGIC					GENER	L INFO	
BO	TOMHO	E ASS	MBLY	LENGT	н	Q.D.	1.	D.	FOR	MATIO	-	MD	$\exists$		TVI	D .	FULHOFO	3Y		Dia Na	RIG	MFO	
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					W 17-27-0							MEY.	CTN	ПΥ									
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			Eng	ineeri	ng & S	Supervis	ion		EX	AC	TE	ngi	nee	rin	ıg, lı	nc.		C	918) 59	9-94(	00		
Oper	etor:			G60 C	io of Ut	nh, LLC			VILY	D	RII	LII				DIRT							
DATE 07	22/04	WEU		verine	Federa	17-2	CONTRAC		ODT R	lic#1	0		1				SPUD DATE 07/02/04	ı	<u> </u>	SU			itz
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BIT NO.	SIZE	MFG.	1	YPE	IADC CODE	SERIAL	NO.	JE		nd")	П	IN			OOTAGE	HOURS	ROP	MIT			WOB		ONDITION
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PUMP NO.	MAN	UFACTUR	ER	UNER	STROKE	GAL/STK	SPM	GP	M ^	V DP	AV			ı			HHP/IN <sup>2</sup>	ECD	T	30	) spm	49spm	100 spm
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2	+	ilson 60	0	5*	14	ļ	<u> </u>	├	-			+		<u> </u>					2			<del></del>	l
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3-1/2				4,511		3.500					二								_		CALCIUM IN AUTHOR IN AUTHO		7/20
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Operat	or:	Wolve	rine G&O	Co of	Utah, LLC	:	Ì	JAĪ	LY D	RIL	LIN	1G	REP	DIRT	-		\PI	# 43-0	41-30	031		
ATE		WELL					NTRACT	OR			·········	COUN	TY, STATE		SPUD DATE	T^	FE	<del></del>	SUPERV	SOR		
07/2			Volverine		erai 17-2		<del>-</del>	TOTAL	T Rig#1		PROGRE		ier, UT	LIN 3 TIME	07/02/04 ROP		~~~	ATION		TH D	Has	h
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NO.				LENK		4			<b>↓</b>	<u> </u>		ESS.	PRESS.	<u> </u>		<b></b>	_		-	1		
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Both			<u> </u>			ㅗ						1		<u></u>		<u> </u>	_		ALL	187		
BOTTO	HO F	ASSEMBL	DRILL		NG O.D.		I.D.		FORMATIO	N I	MO	1	GEOL	OC BC		3Y	4		GENER	INFO	HTU	
3-1/4 Bi			<del> </del>	0.75		250		1		1			<u></u>		Anhy 10%			Rig No			5) 97	9-464
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dibl pin :				1.88	4.	125									Lime 30%			Last BO	OP Test			7/20
monel (	С		- 2	8.82	4.7	750		BX	TOMS UP	TME	BG G	AS	GAS (	DAT ( NG VS	TRIPGA	S		Next B	OP Test		_	7/27
MWD P	ulsar			5.64	4.7	750			30	1			SHO		<u> </u>				lety Me	eting		7/22
Float su	ıb			3.02	4.7	750		#	GAS UNIT	s	FRO	м		0	ROP (FIA	FR)		Last Bo			_	7/20
26 jts -	spiral	HWOP	80	3.10	4.7	750	2.1	25											perate P		_	7/20
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9:30	1:0				w/ 3-1/2	strin	g															
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7:30	6:0											rotate	81' / slic	de 89'; las	st kelly 20' rotat	e / 12	' slik	de				
			N	ote: E	BLM Insp	ector	Alan 1	Naike	r made	onsit	e insp	ectic	n; OK, n	oxoncen	ns							
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Daily 1	otal	24.	00											<del></del>								

PERT NATA

		1	Eng	ineeri	ng & S	Supervisi	on		E	KACT	ΓΕι	ngin	1661	ring, l	nc.		(	(91	B) 599-	9400		
Opera	tor:	Wolve	erime	G80 C	o of Ut	m, LLC		Di	AIL	Y D	RIL	LIN	IG	REP(	DIRT		~ A	PH	F 43-0	41-300	031	
DATE		WELL					CONT	RACTOR				***************************************	1	TY, STATE		SPUD DATE	AF	FE	<del></del>	SUPERVIS		
07/2	24/04 SPUD	2		Verine I		17-2	L		DDT TAL DE	Rig#1		ROGRE		ier, UT	LIN 3 TIME	07/02/04 ROP	FC	ORMA	TION		teve Ha	
	22					core poi	nt		5	716		17	70	1	125	15.1	1	Lim	e,Sh,Ai	nhy	6,6	50
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wı		VIS.	$\dashv$	WL.	-		94 7,5	9AN		90U08 0.8	*	PV 8	11	GELS 3/6	DEPTH 5716	DATE/TIME 7/23/04 8:30pm		.000		180		57,000
9.8		36		8.0		tr i	.5	0.0	<u> </u>	0.6			DATA		37.10	7/23/04 0.30pm	- 33					07,000
BIT S	iŽE	MFG.	<del>-</del>	YPE	IADC	SERIAL	VO.		JETS (1		$\neg$	iN	OUT		HOURS	RÓP	M	m	RPM	WOB		ONDITION
NO.					CODE	105537		18	11		8	5435	545	4 19	0.50	38.0		N	80/90	20	TB	G
		SDBS		8709 8709	617Y	105537		12	1		-+	5454	1	281	11.75	23.9		7	130/50	20		İ
	<del>'''   '</del>			2,03	0111	1.0000		- '-	<del>†</del>	1	_		$\vdash$			#DIV/0!		Y				
											$\Box$					#DIV/0!				<u> </u>	$\coprod$	<u> </u>
									HYD	RAULK								$\Box$			PUMP	T-SA
PUMP	MAN	JFACTUR	ER	LINER	STROKE		SP	M (	3PM	AV DP	AVD		UMP ESS.	MITR DIFF PRESS.		HHP/IN <sup>2</sup>	ECO	' <b>I</b>	-	27 spm	43sрп	100 spm
NO.	W	son 60	<del>o</del>	5"	14	3.8	84	0 :	304	242	243		700	150	t				1	250	550	
2	+	son 60	-	5"	14														2			
Both												$oldsymbol{\mathbb{L}}$	$\Box$		L		<u></u>					
				WILL S										GEOL		,==-		$\Box$		GENER	AL INF	)
		ASSEMB	LY	LENGT	тн ).75	ол. 6.250		LD.	F	ORMATIO Lime	N T	MC			VD	LITHOLOG	<b>3</b> T	-1	Rig No			79-4644
6-1/4   Motor	311 (1.5 de	eor -			3.47	4.750	$\vdash$		+	Li1116	+	<del></del>	_					1	Cell No		, ,	29-9801
dbl pir		-	1		.88	4.125			厂		士								Last Bo	OP Test		7/20
monel				28	3.82	4.750			вот	TOMS UP	TME	BG G	AS	CON	DATA N C AS	TRIPGA	S	=		OP Test		7/27
MWD	Pulsar				5.64	4.750			1	36		23		SFR	W:	<u> </u>			Last B	afety Me	eting	7/23
Float :					3.02	4.750	<del> </del> —	2.12	-	GAS UNT	5	FRO	M.		10	ROP (FT/F	€R)			perate Pi	ine Rag	+
26 jts	- spiral	HWD	<del>-</del>	803	3.10	4.750	-	2.12	┪		$\dashv$					<del> </del>		$\dashv$		perate B		+
			$\dashv$		$\dashv$		一		1		_		一							perate A		7/23
			7																			ļ
											$\dashv$											┼
			_				_		1		$\dashv$		_			<u> </u>			<u> </u>			┼
			$\dashv$	-			╁		╂				_									<del>                                     </del>
			$\dashv$		$\dashv$		$\vdash$		1		一		$\dashv$									
Total	BHA:		_	86	1.68			V. 1	1													
STRIN	SWT.	BHAW	r.	PUW	T.	SOWT.	ROT	. TORQU	GF	D. ELEVA	TION	GL TC			EV/ TION	INTERMEDIA 7" @ 54				CASING 2 5435		CASING 0 6650
8	<u> </u>	20		120	<u> </u>	60				5,835		12	VEY:		,847	/ W/ 54		_	, ,	3 3733	1 + 1/2	<u> </u>
MD	INC	I AZIA	(UTH	TVD	SECTIO	N N+/S-	E+	/W-	DLS	TOOL	ME		NCL.	AZIMUTH	T	TVD	SECTI	ION	N+/S-	E+/W-	DL8	TOOL
5,56	_			5543	_		_		2.60	mwd	5,6	61 2	2.90	122.90	L	5639	-0.4	_	-46.67	<del></del>		
5,59	-	0 14	5.50	5575	-2.92	2 -44.87	-10	3.51	2.00	mwd			3.20	113.90	<u> </u>	5654	0.1	7	-47.05	-100.8	6 3.76	mwd
			~		T 24 HOL	De:					C	ALY	ACT	VITY								
6:00			00 00				06: 1	101 ft i	n 8 h	rs = 13	3.8 fp	sh; rot	ate 4	0' / slide	6' Drill	ing Brk 5703' to	5706	;'				
2:00			.50	Ct	eck fi	ow, 8 bbl	pit ga	ain, S\	NI @	2:15p	m, SI	IDPP	450 j	osi in 151	min, stabi	lized, calc 10pp	og kill v	wt n	nud			
2:30	1		.25	M	onitor '	well, hold	safe	ty mtg	, beg	in circ	out o	on cho	ke @	SPR, s	hut down	, cond gas cut i	mud &	inc	r MW t	o 8.75p	pg, con	plete 1.
7:45	_		.25	G	off c	noke, res	ıme (	circ &	cond	gas cu	ıt mu	id dov	vn flo	wline, in	or to 9.2 p	opg, check flow	, ~ 1/8	s bp	m			
9;00	_		.50			drig 570									M Joom e	alt			<del></del>			
9:30 10:3			.00 .50			iples, che e to incr N									)0()ppm s sc				····			
10.3	<del>- 1 0:0</del>	<del>~   '</del>		<del>  ~</del>	,, , (I) TUN	- w 1107 N	4			<b></b>												
	1	丁																				
	L	$\perp$												. <u></u>		<u></u>						
<u> </u>	4			<del> </del>				40	. A		N	ities -	n 2-	d NOL -	na hand						<del></del>	
	+	+				mni notific 2 gals	O 101	TUPIT	ION!	ynt, st	a Well	ini i G	#1 ZI)	u MWL O	UT INSTITU							
<del> </del>	+	$\dashv$		M	10 1192	ege: 3 and	o dri	II, 1 al	stear	ate. 3	anco	pac.	569 :	salt, 7 flo	zan, 6 de	foam, 2 liq floza	an					
$\vdash$	+	_		<b>—</b>		- Jul 10 10111				, -												
	丁	丁																				
Delh	Total	24	4.00																			

AVEL HATA

		Er	gineeri	ng & S	Supervis	ion						ring,			_	(91	8) 599	9400		
Operat	or:	Wolveri	ne G&O (	o of Ut	sh, LLC		D#	VILY	DRI	LL	NG	REP	ORT			AP	# 43-0	41-30	031	
DATE		WELL				CONTRA			4			NTY, STATE		SPUD DATE	1	AFE		SUPERVI		
07/2 DAYS F/S			OIVERINE VT OPERATI		17-2	I		DDT RIG ALDEPTH	#10	PROG		vier, UT	LLIF IG TIME	07/02/04 ROP		FORM	ATION		TH. DEP	
2	3		Co	ring @	5739			5,739	•		23		6.00	3.8		Li	me,Sha	ile	6,	650
										W.	D DAT	X								
wr		vis.	WL.			PH 7.0	SAND		LIDS %	PV 8	<del></del>		DEPTH	DATE/TIME	+	1LORID		CALCIUM 380	MBT	SALT PPM
9.8	<u> </u>	36	4.0		1/64	7.0	tr		1.5		T DAT		5716	7/24/04 8:00pm	1 ''	00,00	V 1	300		264,000
BIT SU	Æ M	FG.	TYPE	IADC	SERIAL	NO.	JI	ETS (1/32nd	າ	IN	O.		HOURS	ROP		MTR	RPM	WOB		CONDITION
NO. 6-1	/4" ST	DBS S	EB709	617Y	10553	760	18	or TFA	18	543	5 54	54 19	0.50	38.0		N	80/90	20	<del>                                      </del>	B G
4R 6-1			EB709	617Y	10553		12	12	12	545	_		11.75	23.9		Y	130/50	20	++	1
5 6-1			O3FD	diamono	19634	51	na	na	na	571	<del></del>		8.50	3.5		N	50	10-12		
													Ι	#DIV/0!					$\prod$	
								TYDRAU											PUM	_
PUMP NO.	MANUF	ACTURER	LINER	STROKE LENGTH	GAL/STK	SPM	G	PM AV	DP A	/DC	PUMP PRESS.	MTR DIFF PRESS.	[	HHP/N²	E	CD		27 spm	43sp	m 100 sp
1	Wilso	on 600	5"	14	3.8	80	30	04 24	2 2	42	1700	150					1	250	550	
2	Wilso	on 600	5"	14		Ĺ											2	<u>L</u>		
Both	<u> </u>		<u> </u>	Ļ	<u> </u>	L							<u> </u>		<u> </u>					
BOTTO	MHÖLE AS	SECURI V	DRULL S		Ö.D.	1.1		FORM	TON	_	MD		O SIC	ЦТНОГО	GV			GENER	AL IN	Ō
		125 x 3.	<del> </del>	0.50	6.125	T	-`	Lin						2,,,,,,,			Rig No			979-464
core bb	5.75		34	.50													Cell No	. Steve	(918)	629-980
K-OVER Y			+	.02		<b>.</b>		ļ		1	]	(2)(5)	DA A	<u> </u>				OP Test		7/20
nydraut			+	.60	4.750			BOTTOMS		T	GAS	co	IN C AS	TRIP GA	S			OP Test		7/27
26 jts - :	spear r	IWDP	803	5.70	4.750	-	2.125	GAS U		•	25 OM	SA	:	ROP (FT/A	0.51		Last B	ofety Me	SIH IÇ	7/20
			<del>                                     </del>			<del>                                     </del>		GASO	IN 15	<del>                                     </del>	NOM.		10	NOT (F1)	100)			perate P	pe Ra	
																	Last O	perate B	ind Ra	m 7/22
										_							Last O	perate A	nnular	7/23
			<del> </del>							<del> </del>								·		
			┼	+		├		<u> </u>	<del></del>	├							<b></b>		-	+
			<del>                                     </del>	$\dashv$		1			·····					1						+
Total E		SHAWT.	845 PUW		SOWT.	ROLT	ORQUE	GRO. ELE	VATION	l at	токв	KBE	EV/ TION	INTERMEDIA	TE CSG		LAST	CASING	) NE	KT CASING
80		20	120		60			5,8	<del>~~~</del>	1-	12		,84 ′	7" @ 54	135		7" <b>@</b>	5435	4-1/2	2" @ 665
										<b>S</b> X.	ii.V.Bir	5								
MD	INCL	AZIMUTI		SECTION		E+/W		LS TO	_	MD CC4	INCL.	AZMUTH 122.90	F	TVD 5639		TION	N+/S- -46.67	E+/W-		
5,565 5,597	1.60 2.10	158.00	<del></del>	-3.94 -2.92	<del> </del>	-104.0 -103.5	_	60 mv		661 676	2.90 3.20	113.90	┼──	5654	+	46 17		-100.8	+	
5,551		1.70.5	-1 30.0		, 11.01	,	- 1 -	1 1114			ACTI							1	,	
FROM	ΤŌ	HRS		24 HOUR						·										
6:00	7:30	1.50			ndition m					flow	or 15n	nin								
7:30 8:00	8:00 10:00	2.00			6 stands		csg,	оп (2) 5	J <del>44</del>				<del></del>	<u></u>			·····			
10:00	11:00	1.00	<del></del>		m, circ bo		up, no	o incr or	n btms	up			<del></del>					<del></del>		<del></del> -
11:00	4:30	5.50	TO																	
4:30	5:00	0.50	<del></del>		MWD to															
5:00	8:00	3.00			NQL cori		Λ				<del></del>									
8:00	11:00	3.00		1 w/ 30 ash to l	core bb	1														<del></del>
11:00 12:00	12:00 6:00	6.00	<del></del>		om 5716	to 573	9 at re	port tim	e; pre	senti	y 15 m	pf								
	3.50	†	† <u> </u>	36 114	0. 10				-, p			<u> </u>								
			-			and or	locat	tion; 2 N	IQL oc	ore ha	inds o	n locatio	n; John S	Spears, Don Bro	ck					
		<b> </b>		el: 630			0 -1		0		740	_4 ^8-		form Olin Arm						
	1	1	1 Mu	KU USAC	ae: u anc	o anii.	u aist	earate. I	u ancc	o pac	. /49 5	Sait, U Tio	zan, u oe	foam, 0 liq floza	s(1)					
	<b></b>		1							•										
		-														-,				

POST NATA

		Er	gineeri	ing & S	Supervis	ion						ring, l				(91	8) 599	9400		
Operat	tor:	Wolveri	ne G&O (	o of Ut	ett, LLC		DA	ILY D	RIL	LH	1G	REP	ORT	<u> </u>		API	# 43-0	41-30	031	
DATE		WELL.				CONTRA						ITY, STATE		SPUD DATE	ľ	AFE		SUPERVI		
07/2 DAYS F/S	6/04 PUD		Olverine VT OPERATI		17-2	<u> </u>		DT Rig#		PROGRE		vier, UT	LEGTIME	07/02/04 ROP		FORM	ATION		TH. DEPT	
2	4			irc @ 5	5765'			5,765	- 1		26	- 1	8.00	3.3	ľ		Lime		6.6	
										MUD	DAT	A								
wr		VIS.	WL.		сж	PH	SAND	80LI0	S%	PV	YF	) GELS	DEPTH	DATE/TIME	CHI	LORID	ES	CALCIUM	MBT	SALT PPM
9.8		35	5.6	<u></u>	1/64	7.0	tr	1.0	<u> </u>	6		3/4	5747	7/25/04 9:00pm	16	6,00	0	420	نلل	274,000
BIT SI	ZE I M	IFG. J	TYPE	IADC	SERIAL	NO. I	le T	'S (1/32nd')		BIT	DAT/		HOURS	I ROP		MTR I	RPM	I WOB	T Mari	CONDITION
NO.				CODE				or TFA			L	100,20		, nor			RT+MTR	1100	T B	
4 6-1	<del></del>		E8709	617Y	10553		18			5435	545		0.50	38.0		N	80/90	20	$\bot \bot$	<b>↓</b>
4R 6-1			EB709	617Y	10553		12		-	5454	571		9.00	31.2	$\dashv$	Y	130/50	20	++	-
5 6-1 5R 6-1	-		O3FD	diamono	19634 19634		na		-	5716	574	16 30	8.50	3.5		N	50	10-12	╂╌╂╌	┿
2KJ 0-1	76   L	)PI ] '	-03FD	diamono	19034	151	na	na   YDRAULI		5746	<u> </u>		<u> </u>	#DIV/0!			70	12		<u> </u>
PUMP	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	GPW		LAVO	DC PL	JMP I	MTR DIFF	г	HHP/IN²	ECI	D		27 spm	PUMP 43son	1 100 spr
NO.				LENGTH	<b>!</b>				<u> </u>	PR	ESS.	PRESS.								
1		on 600	5"	14	3.8	68	258	242	242	2 14	100		<b> </b>		ļ		1	250	550	ļ
2	Witso	on 600	5"	14		├	╂		┼		$\dashv$		<b>├</b>		<b> </b> -		2	<u>L</u>	<u> </u>	<u> </u>
Both					<u> </u>	<u> </u>			1				<u></u>		<u> </u>					
BOTTO	WHOLE AS	SSEMBLY	DRILL S		Q.D.	I.D		FORMATK	ON I	MD		GEOL	.OI 38C	<b>L</b> TTHOLOG	SY.	$\dashv$		GENER	AL INF	U
		125 x 3.		.50	6.125			Lime									Rig No			979-464
(2) core	bbl		65	.30	5.750				$\Box$								Cell No	Steve	(918)	529-980 <sup>-</sup>
x-over v			1	.02		<u></u>					[	<u> </u>	nat a	L				OP Test		7/20
float sui			<del></del>	.02				OTTOMSU	TRAE	BG G/			NG AS	TRIP GA	S		-	OP Test		7/27
monel [			<del> </del>	0.70	4.750	Ή		36		125		SHC		<u> </u>				fety Med	eting	7/25
hydrauli 26 jts -		MOD	803	.60	4.750		.000	GAS UNIT	8	5,74			765	HIT-I) 409 0.2	R)		Last B	perate Pi	ine Dam	7/25
20 pa -	oşni en 1	11107	1		4.750	<del>                                     </del>		300	一十	3,74	~	<u> </u>	<u> </u>	3.0		_		perate B		
			<b>!</b>	$\top$				· · · · · · · · · · · · · · · · · · ·										ocrate A		7/25
																			•	
			<u> </u>								_									<u> </u>
			<b></b>			<b> </b>	_				_			<u> </u>						<u> </u>
			├			-	-				$\dashv$			<b>!</b>						┼─
Total E	ALIA.		910	24			-		-		一			<b></b>		-				<del> </del>
STRING		HAWT.	PUW		SO WT.	ROT TO	ROUE	GRO. ELEVA	TION	GL TO	KØB	KØ EU	VA RON	INTERMEDIAT	E CSG		LAST	CASING	NEXT	CASING
80		20	120		60	<u> </u>		5,835		12		5,	847	7" @ 543	35		7" @	5435	4-1/2	@ 6650
							T-11			SUR			<del>-</del>						<b></b>	
MD	INCL	AZIMUTH	TVD	SECTION	N+/S-	E+/W-	DLS	TOOL	MO		CL.	AZIMUTH	<del> </del>	TVD	SECTI	N	N+/S-	E+/W-	OLS	TOOL
								1	1	$\top$	一		<b></b>							1
									D	ALY)	CTN	ATY								
FROM	70	HRG	<del></del>	24 HOUR																
6:00	8:00	2.00			m 5739 1			<del></del>												
8:00	9:00	1.00			e & drop								<del>-</del>		***		<del></del>	<del></del>		
9:00	1:00 4:00	3.00	<del></del>		ning to 4 core #1,		2nd ~	rop hihi #	Thora:	el.		#* - · · · · · · · · · · · · · · · · · ·	<del></del>							
4:00	8:00	4.00	TIH		WACH!,	- Annual		~~ OL/I OL		اب		· · ·						····		
8:00	2:00	6.00			m 5746 1	to 5765			<del></del>		<del> v</del>						· · · · · · · · · · · · · · · · · · ·			
2:00	2:30	0.50			ed up, se			ng, well	flowin	ıg, SV	VI, no	pressu	ne							
2:30	3:30	1.00			ut rotatin															
3:30	6:00	2.50	Cin	c & cor	ndition, ra	aise mu	d wt to	10ppg,	prep	to cor	e ah	ead								
		i	<b></b>																	
		1																	······································	<del></del>
			├																	
			N-	la: NO	000	Omnit	- 1A/F	DE Dalla		WD a		ndh								
					L coring,	Omni k	ıb, WF	RF Drille	& MI	WD o	n sta	ndby								
			Fue	el: 336	gats								( defne	n O lio flozan						
			Fue	el: 336	gats								, ( defoar	n, 0 liq flozan						
			Fue	el: 336	gats								, C defoar	n, 0 liq flozan						

COST DATA

			En	gineeri	ing & S	upervis	ion		E)	(AC	TE	ngir	1001	ring,	In c	C.	·		(9	18) 5	99-9	<b>400</b>		-
Ope	rator	: 1	<del></del>	ne G&O (		<u> </u>		DA						REP			·		<u> </u>	<u> </u>		11-30	031	
DATE			WELL.	<del></del>			CONTRA			5: "			1	TY, STATE			SPUD DATE		AFE			SUPERVI		
	7/27/( F/SPUC			OVERATI		117-2	<b></b>		AL DEP	Rig#1		PROGRE		er, UT	arii i	IG TIME	07/02/04 ROP		FOR	MATION	1		teve H	
	25			Co	ring @	5806'		<u> </u>	5,	806			11		7.5	50	5.5			Lim	ie		6,6	50
	wt	Т	VIS.	, WL		ск	PH	SANO	<u> </u>	SOLIDS	S %	PV	DAT		Τ.	DEPTH	DATE/TIME	С	HLORI	DES	C	ALCIUM	MBT	SALT PPM
	9.9		41	4.0	1	/64	7.5	tr		1.0		14	10	6/8	I.	5766	7/26/04 9:00pm	1	86,0	00		1800		06,900
BIT	SIZE	T MF	G I	TYPE	IADC	SERIAL	NO I		ETS (1/3	12nd")		BIT	DATA	·	GE .	HOURS	ROP		MTR	RP	· T	woe	I DULL	CONDITION
NO.		_			CODE	<b></b>			or TF	<u> </u>	$\dashv$		<b>Ļ</b>		7.				_	RT+N	TTR		T B	
-	6-1/8" 6-1/8"	D		O3FD O3FD	diamono diamono	19634 19634			1.3		$\dashv$	5716 5746	574 576		+-	8.50 6.00	3.5 3.3		N	70		10-12 12	++	+
6	6-1/8"	D	PI 4	O3FD	diamond	20164	181		1.3	2		5766	580	7 41	1	7.50	5.5		N				Ш	
Ц		<u>L</u>			<u> </u>	<u> </u>							<u> </u>	<u> </u>	<u> </u>		#DIV/0!		<u> </u>	<u> </u>				
PU	P M	ANUFA	CTURER	LINER	STROKE	GAL/STK	SPM		PM	AULK AV DP	AVI	DC PI	JMP	MTR DIFF	Τ.		HHP/IN <sup>2</sup>	E	CD	$\vdash$		SLOW 27 spm		100 spm
NC 1		Mileo	n 600	5*	LENGTH	3.8	68	1 2	58	242	24		ESS.	PRESS.	+-			<u> </u>			$\Box$	250	550	
2			n 600	5"	14	3.6	1 06	1	~+	444	24	<del>*   '</del>	***		+			H		2	-	230	530	
Во	h							I				$\perp$			I									
90	UCAL	X F AS	SEMBLY	DRULL S		O.D.	1.0		En	RMATIO	N 3	MO	-	GEO	TO:	GIC	LITHOLOG	SY.			_	SENER	AL INFO	
_			25 x 3.		0.50	6.125	•			Lime			二							Rig	No:			79-4644
	ore bi			<del></del>	5.30	5.750	-		_		_		_										(918)	29-9801
x-ov float	er w/ f sub	NO SET		<del>                                     </del>	1.02 3.02		<del>                                     </del>		BOTT	OMS UP	TIME	9G G	S I	GAS CO	DA 7	A AS	TRIPGA	5		-		P Test		7/20 7/27
mon	el DC			30	).70	4.750				36		200			0		500			Last	Sef	ety Mee	ting	7/26
	aulic j		A#DD	<del> </del>	3.60 3.10	4.750	+	2.000 2.125	G	AS UNITS	5	FRO	4		10		ROP (FT/H	R)				P Orill	Po	7/25 7/23
20 J	s - spi	rax m	NUP	803	5.101	4./50	<del>'</del>	2.125	<u> </u>	·,	一		十	····								erate Pi erate Bi		
											$\Box$									•		erate Ar		7/25
_									_		-		$\dashv$							<b> </b>				-
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				<del> </del>			<del> </del>				$\dashv$		$\dashv$	<del></del>					<del></del> .	<b> </b>				1
	al BH/			910						****														CASING
	NG WT. 80	-	20	120		90 WT.	ROT. TO	RQUE		ELEVAT	TON	GL TO 12	$\neg$	KB E	,847		INTERMEDIAT					ASING 5435		@ 6650
												SUR	VEYS		=									
ME		+CL	AZIMUTH	TVIO	SECTION	N+/8-	E+/W-	D	S	TOOL	ME	) #N	CL.	AZIMUTH	+		TVD	SEC	TION	N+/	S-	E+/W-	DLS	TOOL
	工							1							主:									
FRC		то	HRS	1 1200	24 HOUR	g.					Đ	ALY/	CTN	ITY										
6:0	_	:00	2.00			ndition, n	aise mu	id wt	to 10	ppg,	prep	to cor	e ahe	ad										
8:0	_	:00	1.00			core, bi		.12																
9:0		2:00 :30	3.00 3.50		initor w OH	ell, refab	nyorau	HICS &	s RU	powe	er ton	gs												
3:3	_	:00	2.50	LD	core#	2 (5746	- 5765)																	
6:0	_	:30	3.50	TIF		-i	o harr							<del></del>		···								
9:3	$\overline{}$	0:30 :00	7.50			om 5760																		
	T																							
	+			<b> </b>																				
	士																							
	T					coring,	Omní l	ab, V	/RF I	Oriller	& M	<b>W</b> D o	n sta	ndby										
<u> </u>	+				el: 672 el usan	***************************************	co cel	150 -	SUCO.	bar 1	Can	stic ?	deer	n 1 ale		rate 1	anco pac, 133	sa#	8 fl	)zan	7 14	efoam	() lie fl	
	1				- waay	J. JV 811	July gel,	.55		J-41, 1	JUU	J., J		, . ak					, <i>,</i> , , , ,			J. Jul 11,	~ my m	
	$oldsymbol{\perp}$			<u> </u>																				
Dai	y Tota		24.00	<u> </u>								7,7-1												
												COST	DAT	Α										

			En	gineeri	ing & S	upervis	ion		EXA	CT	En	gine	eri	ng, l	nc.			(\$	918) 5	99-	9400	<del></del>	
Opera	Aor:	W	fotvertr	10 GEO (	Co of Uti	ih, LLC		DA	JLY	DF	RILI	LIN	G F	REPO	ORT	· · · · · · · · · · · · · · · · · · ·	popular et	AF	># 4	3-0	41-30	031	
DATE	2000	- 1	VELL.	- b 1		1.47.0	CONTRA							STATE		SPUD DATE		AFE			SUPERV		
DAYS F	28/04 SPUD			OVERATION OF THE PROPERTY OF T		11/-2	1		DT RI	g#1C		OGRESS		r, UT	LING TIME	07/02/04 ROP		FOR	MATION	·		TH. DEPT	
	26			Circ f	or DST	@ 5860	)	<u> </u>	5,86	0		54		<u> </u>		#DIV/0!			Lin	ne	L	6,6	50
WI			/IS.	I WL		ск Г	PH	SAND	1 0/	DUDS 1		OD D. PV	ATA YP	GELS	DEPTH	DATE/TIME	T .	VII 65				Time!	
9.8			37	6.4			8.0	tr	<del></del>	2.0	+	7	9	4/6	5807	7/27/04 8:30pm	_	HLOR 158,0		-	1300	MBT	SALT PPM 260,700
												BIT DA	\TA										
BIT S NO.	IZE	MFG	3	TYPE	CODE	SERIAL	NO.	JE	TS (1/32nd or TFA	רו		IN	OUT	FOOTAGE	HOURS	ROP		MIT	RT+		WOB	DULL T E	CONDITION
	1/8"	DP		O3FD	diamond	19634	151		1.32		5	716	5746	30	8.50	3.5		N	5	0	10-12		
	1/8" 1/8"	DP	<del></del>	O3FD O3FD	diamond	19634 20164			1.32		<del></del>		5766 5807	20 41	6.00	3.3		N.	17		12	++	-
	-	SDB	<del> </del>	EB709	617Y	10553		12	1.32	12			5860	334	7.50 15.25	5.5 21.9		N	50/·		12 20	++	-
					·			A	YDRAL	TUC:	\$					<u> </u>			1			PUMP	1
PUMP NO.	MAN	UFAC	TURER	LINER	STROKE LENGTH	GAL/STK	SPM	GPI	M AV	DP	AV DC	PUMP		TR DIFF		HHP/IN <sup>2</sup>	E	CD	T		29 spп	43spr	100 spm
1	W	ilson	600	5°	14	3.8	68	25	B 24	2	242	1400		RESS.			<del>                                     </del>			Н	290	╁	+-
2	W	ilson	600	5"	14					丁			工						2				
Both	<u> </u>						<u> </u>			$\bot$			$\perp$		L								
80110	MHOLE	ASS		DRULL S		O.D.	I.D.	$\Box$	FORM	ATKON		MD	_	GEOL	O SIC	LITHOLOG	3Y		T			AL INF	)
DPI ∞	_				0.50	6.125			Lin				1			Limotos			Rig	No:			79-4644
(2) con					5.30	5.750					$\bot$		$\perp$						+			(918)	329-9801
x-over float su		eat			3.02		<u> </u>				Щ.			GAS D	A IA	L			-		P Test		7/20
monel				_	0.70	4.750	<del>                                     </del>	1	BOTTOMS 30		ME	9G GAS 49	+		16 AS	TRIP GA	s		-		P Test fety Me	etina	7/27 7/26
hydrau	lic jan	3		6	.60		2	.000	GASI	INITS		FROM	İ	SHO	Wit	ROP (FT/H	IR)		4		P Drill	<b></b>	7/25
26 jts -	spira	HW	/DP	803	.10	4.750	2	.125					_									pe Ran	
					-			-			+		+			<b> </b>			_		erate B erate A	ind Ran	7/22 7/25
				<b></b> -	$\dashv$		<del>                                     </del>	_			+		+		<del></del>				Lass	. Op	OTARCE A	MILINE	1123
													L										
					+			-1					1						_				
					-			-			╁		╁						┢				
					1	<u> </u>		1			$\top$		†		··· ········	†			<del> </del>				
Total		-	WT.	910 PUW		SOWT.	ROT. TO		GRO. ELE			9 40 100	L		77 581						ASING		
78	-+		20	120		60	RO1. 10	AUUE.	5,8		× -	12	+	KB ELE 5,8		7" @ 543		·	•		5435	+	CASING @ 6650
												URVE	YS										
MD 5,694	3.1	-	ZIMUTH	TVD <b>5672</b>	SECTION 0.93	N+/S- -47.47	E+/W-	DUS			MD 5.750	INCL	_	ZIMIUTH		TVD		TION			E+/W-	DLS	TOOL
5,726	2.8	_		5704	2.22	-48.20	-98.49	+		_	5,758 5,790	2.50	_	12.80 14.40		5736 5768	_	.34 .39	-48. -49.	37	-97.14 -95.86		mwd
												YAC											
FROM 6:00	6:3	_	HRS 0.50		24 HOURS		e																
6:30	11:0	— <u> </u>	4.50			progres																	
11:00	1:0		2.00	Lay	rdown c	ore #3																	
1:00	1:3		0.50		vice rig																		
1:30 3:00	3:00 6:00		1.50 3.00	PIC		VD BHA													·				
6:00	7:0	_	1.00			ting hea	d																
7:00	9:0		2.00													ur <b>vey</b> s as abov							
9:00	12:3	_	3.50			806' to	5860' -	svy th	en sus	pen	d drilli	ng to	run [	OST of	Twin Cre	ek Lime open t	hole	sec	tion 5	435	' to 586	60' (435	7)
12:30	1:30 2:00	-	1.00 0.50	Circ Pul		ds into 7	7" CSO									<del></del>							
2:00	6:0		4.00	circ	ulate -	waiting (	on DST																
		$\bot$				coring i	& Omni	lab or	stand	by; \	WRF	Driller	& M	WD or	ective;								
	<u> </u>	+			d 420	<del></del>	n act 4"	/E'	0.004	n	ac L	. ^ -				tonnete O						defer:	01:- 5:
	<u> </u>	+		MU	u usage	s. u anco	gei, 1	o cal	c san,	u an	co pa	ı, u ca	USIK	, u des	sco, u ais	tearate, 0 anco	pac	i, U !	san, 5	1102	zan, 1 (	Jeroam	, v iiq tiq
		士																					
Daily T	otal		24.00																				
-				<del></del>							C	281 D	ATA										

		Eı	ngineen	ing & S	upervis	ion	_	EXAC	TE	ngine	eri	ng, lı	nc.			(9	18) 599	-9400		
Operat	tor:	Wolver	ine G&O	Co of Uta	in, LLC		DA	ILY D	RIL	LINC	3 F	REPO	ORT	-		AP	# 43-1	)41-30	031	
DATE		WELL			·····	CONTRA						STATE		SPUD DATE		AFE		SUPERVI	SOR	
07/2			Olverine		17-2	L		DT Rig#1		ROGRESS	evie	r, UT	LIF IG TIME	07/02/04 ROP		EOD	ATION		teve H	
2	27			TOH	ł			5,860	ľ	0				#DIV/0!			Lime		6,6	
										MUD DA	ΝYΑ									
WT	$\Box$	VIS.	WL	7	СК	PH	SAND	SOLID	3 %	PV	ΥP	GELS	DEPTH	DATE/TIME	Ċ	HLORIC	ES	CALCIUM	MBT	SALT PPM
9.8		37	6.4		/64	8.0	tr	2.0		7	9	4/6	5807	7/27/04 8:30pm	1	58,0	20	1300		260,700
BIT SI	ŻE I N	MFG.	TYPE	IADC	SERIAL	NO 1	165	TS (1/32nd")		BIT DA	TA	FOOTAGE	HOURS	I ROP		MTR	RPM	I WOB	Lower	CONDITION
NO.			11112	CODE	300		JE.	or TFA	$\bot$			00170	ricores	NOF			RT+MTR	, wos	T B	
5 6-1			FO3FD	diamono	19634			1.32			746	30	8.50	3.5		N	50	10-12	$\bot \bot$	↓
5R 6-1			FO3FD	diamono	19634			1.32			766	20	6.00	3.3		N	70	12	┼-├-	╂
6 6-1 4R 6-1	-		403FD SEB709	diamond 617Y	20164 10553		12	1.32 12 1			807 860	334	7.50 15.25	5.5 21.9		N	70 50/130	12	╂╌╂╌	╁
#1/0	74 [ 3	000] (	)CD/ 03	1017.	1 10000	,03		YDRAULK		300/   3		334	13.23			<u></u>	307130		PUMP	<u> </u>
PUMP	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	GPI		AVD	C PUMP	M	TR DIFF		HHP/IN <sup>2</sup>	E	CD				100 spi
NO.	ļ		ļ	LENGTH		ļ	4-			PRESS	+-	RESS.			<u> </u>					1
1		on 600	57	14	3.8	68	25	B 242	242	2 1400	4				├		1	270	050	┼
2 Both	VVRS	on 600	5"	14	<del> </del>	├	╅—	-	$\vdash$	+-	+				$\vdash$		2	<u> </u>	350	<u> </u>
المح			DRILLS		<u> </u>	<del></del>	1		<u> </u>			GEOL	D 30:		<u></u>		<u> </u>	GENER	AI BAE	0
вотто	MHOLE A	SSEMBLY	LENG		O.D.	I.D		FORMATIO	N .	MD	Ţ	T.		LITHOLOG	3Y				NFO	
6-1/4 B			+	).75	6.250	<del> </del>		Lime	$\perp$		1			ļ			Rig No			979-464
Motor (		3)	+	3.47	4.750				$\dashv$		+			<b></b>				Steve	(918)	T
dbi pin : monei (			+	1.88 3.82	4.125 4.750		$-\mathbf{L}$					GAS	A A	<u> </u>				OP Test		7/20 8/20
MWD P			+	5.64	4.750	<del>                                     </del>		90110MSUP 36	TRARE.	BG GAS	+	CONF	VC AS	TREP GAS	<u>s</u>			efety Me	stina	7/28
Float su	ıb		1 :	3.02	4.750			GAS UNIT	3 1	FROM	+	SHO	W	ROP (FT/H	R)			OP Drill		7/25
26 jts -	spiral l	WDP	803	3.10	4.750		2.125										Last O	perate Pi	pe Ram	7/28
			<u> </u>	_		<u> </u>			_		_			ļ <u>.</u>				perate B		
			-	+		-			$\dashv$	-	+			<b> </b>			Last O	perate A	mular	7/28
			+	$\dashv$				<del> </del>	$\dashv$		+	<del></del>	<del></del>							+
			1	_					$\dashv$		+									<b>†</b>
				$oldsymbol{ol}}}}}}}}}}}}}}}}}$							$\perp$		_							
						<u> </u>			_		4			<b> </b>			<u> </u>			<u> </u>
Total E		BHAWT.	861 PUW	.68	SO WT.	ROT. TO	ROUE	GRO, ELEVA	ION	GL TO KB	+	KB ELE	VA TION	INTERMEDIAT	E CSG		LAST	CASING	I NEX	CASING
78		20	120		60		1	5,835		12	T	5,8		7" @ 54			7" @	5435	4-1/2	@ 6650
										SURVE	75			•						
MD	INCL	AZIMUTI		SECTION		E+/W-			MD			ZMAUTH		TVD		TION	N+/S-	E+/W-	DLS	TOOL
5,694	3.10	116.9	5672	0.93	-47.47 -48.20	-99.96 -98.49	<del></del>		5,75 5,70	<del></del>	+	12.80		5736 5768	_	.34	-48.32 -49.37	+	0.22	
5,726	∠.00	1 13.0	5704	2.22	-0.20	1 -30.43	, J U.9	5 mwd	5,79	0 2.50		14.40		5700		.03		1 -90.00	1 0.22	mwd
FROM	ŤŌ	HRS	LAS	7 24 HOUR	9:															
6:00	10:30		-			3 5360	in pre	p for DS	r (la	y flowlin	e fo	DST,	build pre	mix pit to 11ppç	), se	t mu	d/gas s	eparato	#2 wh	ile circ)
10:30	11:00	+	<del></del>	i to btn									0.74	40						
11:00	2:00	3.00	<del></del>			new 13	ррд п	nud over	1 tull (	circ to ra	aise	MW ITC	9.7 to	10 ppg, circ & o	conc	muc	1			
2:00	6:00	4.00	10	H for C	131					<del> </del>										
		1	<del>                                     </del>			<del>~</del>						<del></del>		<del></del>						
	ļ	ــــ	1-				·	· · · · · · · · · · · · · · · · · · ·					<del></del>					·····		
	-	-	<del> </del>											<del> </del>					<del></del>	
		+	No	te: NO	coring	& Omn	i lab o	n standhy	WR	F Driller	- 8 M	IWD ~	:standhy	; Rebel testing	acti	ve			·····	
	<b></b>	1		ei: 378		- VIIII	0		,		~ "			, wany		- <del>-</del>				
		1				o gel, 2	45 cal	c sait, 0 a	nco i	bar, 0 ca	usti	c, 0 de:	sco, 0 als	tearate, 0 anco	pac	c, 0 s	ait, 3 fk	ozan, 1	lefoam	, 4 liq fl
			T																	
Daily T		24.00																	<del> </del>	

COST DATA

		En	gineeri	ing & S	upervis	ion	E	EXAC	T Er	ngine	ering, l	nc.			(918	) 59 <del>9</del>	9400		
Opera	tor:	Wolverla	10 G&O (	Co of Uta	nh, LLC		DAI	LY D	RIL	LING	REP	ORT			APM	43-0	41-30	031	
DATE		WELL				CONTRAC				- 1	NTY, STATE		SPUD DATE	1	AFE		SUPERVI		
07/3	30/04		olverine IT OPERATI		117-2	L	TOTAL	T Rig#1		ROGRESS	vier, UT	LII IG TIME	07/02/04 ROP	F	FORMA	TION		TH. DEP	
2	28		Dri	lling @	5860'			5,860	$\perp$	0		0. )0	#DIV/0!			Lime		6,0	550
			,							MUD DA									
9.8		VIS. 37	6.4	+-		PH 3.0	SAND	80LIDS 2.0			P GELS 9 4/6	DEPTH 5807	7/27/04 8:30pm	<del> </del>	.ORIDE		CALCIUM 1300	MBT	SALT PPM 260,700
										BIT DAT							1500		200,700
BIT S	IZE N	AFG.	TYPE	IADC CODE	SERIAL	NO.		(1/32nd") r TFA	Т	N O	UT FOOTAG	HOURS	ROP	1	MTR	RPM RT+MTR	WOB	DULL	CONDITION G
	1/4" S	DBS S	EB709	617Y	10553	769			2 !	5860	334	15.25	21.9			50/130	20	111	1
															$\Box$			$\prod$	
	_	_				-			-	_		ļ			$\dashv$		<del> </del>	++	+
				<u> </u>	<u> </u>		157	DRAULK	L			<u> </u>			<del>-</del>		91 (94	PUME	
PUMP	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	GPM	AV DP	AV DO	1	MTR DIFF	Γ	HHP/IN <sup>2</sup>	ECI		T	28 spm		n 100 sp
NO. 1	\A/ile	on 600	5"	LENGTH	3.8	71	270	242	242	1450	PRESS.	<del> </del>			-	1	270	┼	╁—
2		on 600	5"	14	3.0	<del>-                                    </del>	1 2.0	272	242	1750	<b></b>	<b></b>		<del>                                     </del>	十	2	1 2/0	350	+
Both																			-
			DRILLS								GEOL				I		GENER		ō
BOTTO 3-1/4 B		SSEMBLY	LENGT	).75	o.b. <b>6.250</b>	I.D.	1	Lime	+	MD	<u> </u>	VD	LITHOLOG	JT	-	Rig No		(435)	979-464
Violor (	1.0 deg	)	18	3.47	4.750											Cell No	. Steve	(918)	629-980
dbi pin			<del>                                     </del>	.88	4.125							DA A	<u></u>				OP Test		7/20
monel WWD i			<del></del>	3.82 5.64	4.750 4.750		B0	TOMS UP	TIME	9G GAS 5	CON	N C AS	TRIP GA	5			OP Test	etino	8/20 7/29
loat s				3.02	4.750		_	GAS UNITS	1 1	FROM	SHC	W:	ROP (FT/H	<del>(</del> R)	_		OP Drill		7/25
26 jts -	spiral l	WDP	803	.10	4.750	2	.125									ast O	perate P	ipe Rar	ns 7/29
			<b> </b>			ļ			-	<del></del>			<u> </u>		_		perate B		-
			<del> </del>			<del> </del>			+				<del> </del>			Last O	perate A	nnular	7/29
				$\top$			$\neg \vdash$		十						+				1
				-			-		_						$\dashv$				-
				+		<b></b> -			$\dashv$		<b></b>		<u> </u>	·. ·	┪		<del>-</del> -		┪
Total			861						土						1			-	
STRING 78		BHAWT. 20	120		SOWT.	ROT. TO	RQUE G	6,835	ION	GL TO KB 12		V/ TION B4 7	INTERMEDIAT		$\dashv$		5435	_	" @ 665
										SURVEY	<u> </u>								
MD	INCL.	AZIMOTH		SECTION	T	E+/W-	DLS	TOOL	MO	INCL.	AZMUTH		TVD	SECTI		N+/S-	E+/W-	-	TOOL
5,694 5,726	3.10 2.80	<del>-</del>	5672 5704	0.93 2.22	-47.47 -48.20	-99.96 -98.49	+	mwd	5,750 5,790		112.80 114.40		5736 5768	3.3 4.3	$\overline{}$	-48.32 -49.37	-97.14 -95.86	1	<del></del>
-7										LYACT	•								
FROM	TO	HRS		24 HOUR															
6:00 8:00	8:00 9:00	1.00		H for E		stina D	ST took	s dual re	corde	er carrier	okr safet	v il iars re	corder,hyd tool	sam	nier	revers	e sub 3	strisı	n (38.56
0.00	0.55	1			OST tools									, , , , , ,	<b>P</b>				
													5860' (425'), ran						
9:00	11:30						t 6" blo	w in bkt	, btm	bkt in 1 i	nin, 14oz	in 3min,	13oz in 5min, 8	loz in	10mi	n,8oz	(9" blow	v) in 15	min, SI
11:30 12:30	<del> </del>	1.00			t-in(30m / (60min)		" blow	5" in 3m	nin. 4"	in 5min	2" in 10m	in, 1" in 1	15min,1/2" in 20	Omin. S	SB ir	30mi	n, WSB	til 60n	nin; SI @
1:30	3:30	2.00	<del> </del>		t-in (120								,				·		
3:30	8:00	4.50										erse sub,	reversed 4600	of ga	as &	mud c	ut oil to	frac ta	nk, finis
8:00 11:00	11:00	_			mple cha							or finanti	ion test MWD,	TIH 14	met -	3D PV 100	nne or	htm d-	in @ s-
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COST DATA

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Both			<u> </u>	<u> </u>	<u></u>	<u> </u>	<u> </u>	1	<u> </u>	<u> </u>			<u> </u>		<u> </u>	1_		SE   SE		
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6-1/4 B		SSEMBLI		0.75	6.250			Lime								Rig	No:		(435) 9	79-4644
Motor (		1)	11	3.47	4.750				$\perp$		$\perp$					_			(918)	29-9801
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monel			+	3.82	4.750		BK	OTTOMIS UP	TIME	BG GAS	Ŧ	CON	N AS	TRIPGA	5	_		ety Mes	rtina	7/29
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1:30	8:00	<del></del>	D	rilling fr	om 5956	to 602	9'													
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Daily	Total	24.0	0																	
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**EXACT Engineering, Inc.** 

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

## CONFIDENTIAL

October 5, 2004

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 17-2 well

Sec 17 T23S R01W Sevier Co., UT API# 43-041-30031

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily activity reports for the subject well from August 1, 2004 through the last drilling report on August 23, 2004. Operations have been temporarily suspended pending acquisition of flowline rights-of-way and while waiting on completion rig availability. Completion operations are expected to resume by mid-October. Wolverine respectfully request that this information remain confidential for the maximum period allowed. As always, please contact either Wolverine or me if there are further questions.

Very Truly Yours

Steven R. Hash

Agent for Wolverine Gas and Oil Company of Utah, LLC

Copies with attachments via email to:

Wolverine – Gary Bleeker, Richard Moritz, Sue Benson, Sid Jansma, Jr., Tim Brock

EXACT Engineering - well file

RECEIVED

OCT 12 2004

OW CHOIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

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			Engine	ering &	Super	rision			EXAC	T E	ngir	eeri	ng, l	nc.		(	(918	) <b>599</b> -	9400		
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						upervisio		E	XAC1	ΓE	naine	eerii	ng, li	 1C.			(91	8) 599-	9400			
									Y D								API	<b># 43-0</b>	41-30	031		
Opera	or:	Wel		GBO C	or Uta	m, LLC	CONTRACT	OR			C	OUNTY,	STATE		SPUO DATE		AFE		SUPERVI		le ch	$\Box$
08/0	3/04			rerine F		17-2		CDD TOTAL DI	Rig#1	0	PROGRESS	Sevie		LING TIME	07/02/04 ROP	-	FORM	ATION		TH. DEP		-
DAYS F/S	spud 32	PRI	ESENT (	PERATIO F	NS LigRe	pair			5,120		0			0.00	#DIV/0!			Sand		6,	650	
											MUDE				,		#LOR(D		CALCIUM	IMBT	SALI	T PPM
WT	4	VIS.		WL	7			SAND	80U09 2.5	-+	PV 7	YP 4	GELS 3/4	0€PTH 6120	8/2/04 8:30pm		68.00		49000		34	
9.8		34		13.0		1/32 7	.0	tr	2.5		BITD				1							
BIT S	IZE	MFG.	ī	YPE	MDC	SERIAL	Ю.		(1/32nd")	T	IN	OUT	FOOTAG	IOURS	ROP		MTR	RPM RT+MTR	WOB	DUL T	B B	OMON G
NO.	4/48	SDBS	- CE	B709	617Y	105537	69 1		1FA 12 1	12	5860	6029	503	2:7.75	18.1		Υ	50/130	20		$\Box$	
		SDBS	+	B709	617Y	105569			13 1	13	6029	6084	55	5.50	10.0		Y	50/130	20	1-1	+	in
	1/8"	DPI	40	3FD	diamno	20164	81	1	.32		6084	6108	65	7.00	3.8		2 >	70 50/130	12-14	++	+	out
7R 6-	1/4"	SDBS	SE	B709	617Y	105569	808			13	6108	6120	12	1.50	8.0		<u> </u>	50/130		V PUN	<u></u>	===
				LINER	STROKE	GAL/STK	SPM	HYI	DRAULK I AV DP	CS L AV	DC PU	MP I I	ATR DIFF		HHP/IN <sup>2</sup>	Ð	CD		26 spr	n	I	
PUMP NO.	MAN	NUFACTU	JRER	LINER	LENGT		3711	<u> </u>	1		PRE	S8.	PRESS.			<u> </u>		[2	380	298	om	
1	W	ilson 6	300	5"	14	3.8	60	228	1	-	18	00		<b>├-</b>		<del> </del>		1 2	380	46	<u>.</u>	
2	W	filson 6	500	5"	14	<del> </del>	<del> </del>	<del>                                     </del>	<del> </del>	+-	+	+		<del>                                     </del>		<del>                                     </del>			4			
Both	<u> </u>			XILL S	TORE	<u> </u>	<u> </u>	<del></del>					GEOL	OC IC					GENE		FO	
BOTT	OMHOL	E ASSEM		LENGT		O.D.	i.D.	丰	FORMATIC		<b>M</b> D	1		vo	илного	GY		Di- No		3 INFO	5) 97	9-4644
		6.125	x 3.5		.90	6.125	<del>                                     </del>	-+	Lime			+			<del> </del>			Rig No Cell N	i: o. Stevi			9-9801
core b					.60	· · · · · · · · · · · · · · · · · · ·		_		$\dashv$		+						Last B	OP Tes			7/20
hydrae xover	unc jei	13			.07		2	000 BC	OTTOMS UP	TIME	BG GA	s	GAS CO	NG US	TRIP GA	s			OP Tes		$\dashv$	8/20
	- spira	al HWI	DP	803	.10	4.750	2	125	36				SH	SWS	600				afety Me	eting	$\dashv$	8/2 7/25
					-		<u> </u>	<b></b>  E	GAS UNIT	rs	FROM	4		10	ROP (FT/	HR)			OP Drill perate l	Pioe R	ams	8/2
					+		<del> </del>	+			<del> </del>	+							perate			8/2
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	BHA				3.67		1		48 F F 7	(4)60	GL TO	V6	20.5	EVA TION	INTERMEDIA	TE CS	g ···	LAS	T CASING	<del>,</del>	æxi c	ASING
STRIN 8		BHA	WT.	PUW 110		SO WT.	ROT. TO	RQUE	3RD ELEV/ 5,835		12			,84''	7" @ 54			4	<b>D</b> 5435			<b>g</b> 6650
Ħ											SUR	VEYS										
MD			ZIMUTH		SECTIO		E+/W-			-	VID IN	ICL.	AZIMUTH	<b>T</b>	TVD	S€	CTION	N+/S	E+ /V	<u>-                                    </u>	<u>LS</u>	TOOL
6,07	8 1.	70 3	36.80	6055	0.04	-44.85	-96.44	1.68	mwd	+	-	-		+		+		1	+	十	一	
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12:0			2.50			coring B	HA															
14:3	_		3.50	TI	H to 5	326' near	csa sho	e, shu	t down,	rig n	ераіг							·•				
18:0	0 6	:00	12.00									o be o	operation	onal prior	to resuming co	ring	activ	ity; nov	on ng	repair	per	contra
_	+	$\dashv$		E)	pect	repairs co	mplete	by mid	day Tu	es 8/	3											
-	+	-+		$\vdash$																		
	$\top$			<del>                                     </del>																		
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-	+	$\dashv$		<b> </b>	nha	vol worse	tranem	ssion 4	බ 9am	from	Farmir	naton	recd 2	nd trans	with wrong con	verte	er (Q)	5pm, e	cpect 3	rd @ 9	)am	today
$\vdash$	+			N	ote: N	QL coring	active.	Omni l	ab activ	ve; V	VRF Dri	iller &	MWD	standby								
	$\top$			F	Jel: 37	78 gals															<u> </u>	
	1	$\Box$		М	ud us	age: 0 an	co pac,	0 calc	salt, 0 a	nco	bar, 0 c	causti	с, 0 хс	de. 0 ced	lar fiber, 0 drill o	deter	rgent	, 0 salt,	0 floza	n, 0 d	eroa	m
Dai	y Tota	<u> </u>	24.00	<u> </u>																		
											COS	TDAT	A									

		E	nginee	ring &	Superv	sion		E	EXAC	TE	ing	jine	eri	ng, i	nc.				(91	8) 599	9400			
Opera	tor:	Wolveri	ne G&O	Co of U	teh, LLC		D	All	LYD	RII	LL	NG	R	EP(	DRT			-	\PI	# 43-	D41-30	1031		
DATE		WELL				CONT	RACTOR			-				STATE	-	T	SPUD DATE	^	FE		SUPER	SOR		
DAYS F	<b>34/04</b> SPUD		O <b>IVERINE</b> IT OPERATI		al 17-2			TAL D	T Rig#1		PROG		evier	, UT	LING TIME	+	07/02/04 ROP		ORM	ATION		Steve		sh
<u> </u>	33	<u> </u>	Co	oring (	6148				6,148			28		1	0.00		2.8			Sand			3,65	0
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9.8		32	18.0		1/3/2	7.0	8AI 0.5		30U08	-	4		үР 2	GELS 2/3	0€PTH 6121	+,	DATE/TIME 8/3/04 7:30pm		ORIO 8.00		50000	MBT	S	ALT PPM
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BIT S NO.	IZE N	AFG.	TYPE	CODE	SERIA	L NO.			(1/32md²) TFA		iN.	1	XUY	FOOTAGE	HOURS	T	ROP	1	MR	RPM RT+MTR	WOB	_	B B	NOTION
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<u> </u>				<u> </u>	<u> </u>			HVE	RAULK	<u></u>					<u> </u>				닉		6.6	V PUI		
PUMP	MANUF	ACTURER	LINER	STROKE		SPI	7	ЭРМ	AV DP	AVE	oc T	PUMP	M	TR DIFF		HHF	7 / IN <sup>2</sup>	ECD		1	26 sp			
NO. 1	Wee	on 600	5"	LENGTH	3.8	51	٠.	194		<del> </del>	+	PRESS.	<u>├</u>	RE8S.	<del></del> -				-	2	+	298	ρm	
2		on 600	5"	14	3.0	+-	-	-	<b>-</b>	$\vdash$	+	1400	+-				- · · ·	$\vdash$		2	380	46	_	
Both											士										<b></b>		<u>~</u> )	·
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	MHOLE AS ne bit 6.	125 x 3.	LENGT	).90	0.D. 6.125	1	I.D.	1	FORMATION Lime	1		MO	1	77	/O	Ŧ	LITHOLOG	Υ		Rig No		MFO /434	27.0	79-4644
core bt			_	5.00				İ								†	<del></del>		7	_	i: o. Steve	•	-	
hydraul	ic jars		6	6.60						$\Box$			匚			I				Last B	OP Test			7/20
float su	b			3.02		<del> </del>		801	TOMS UP	BAE		GAS	F	CONF		Ŧ	TRIP GA	5	=		OP Tes		4	8/20
XOVE			'	1.07		2.	.000	F	36 GAS UNITS	<u> </u>		50	<u> </u>	SHO			900				afety Me OP Drill	eting	$\dashv$	8/2 7/25
26 jts -	spiral I	IWDP	803	3.10	4.750	2.	125	T	GAS UNITS			- COMP	H	•		t	нор (ЕТАН	F()	1		perate F	ipe Ra	HTTS	8/2
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						┼		<b>I</b>		-			_			1				Last O	perate A	nnular	$\Box$	7/31
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Total	RHA.		879	80		a ax				-			⊢			╀			-				+	
STRING	WT.	SHA WT.	PUWI	r.	so WT.	ROT.	<b>TORQUE</b>	GR	D. ELEVATI	ON	GL1	ОКВ		KB ELE	VATION	丰	INTERMEDIAT	CSG		LAST	CASING	I N	EXT C	ASING
80		20	110		65	<u> </u>		<u> </u>	5,835			12	<u> </u>	5,8	47	ㅗ	7" @ 543	5		70	5435	4-1	2 (	6650
MO	INCL	AZIMUTH	TVD	SECTION	N+/S-	E+/V	N- (	OLS	TOOL	MD	_	RVEY		IMUTH			/o	SECTIO	n I	N+/8-	E+/W-	DL	s 1	TOOL
6,078	1.70	336.80	6055	0.04	-44.85	-96.4	4 1	.68	mwd		$\perp$													
		<u> </u>	<u> </u>		<u> </u>	<u> </u>				<u> </u>			<u> </u>	1							<u> </u>	<u>L_</u>		
FROM	то	HRS	LAST	24 HOUR	8:					D/	AILY	ACT	MIL	7										
6:00	3:00	9.00													l prior to	res	uming corinç	activi	ity;	now or	rig rep	air pe	100	ntract
3:00	5:00	2.00			omplete								shal	ker							***************************************			
5:00 5:30	5:30 7:30	0.50 2.00			circ btms 5326 to								5 5	875 - 6	3120			<del></del>		·				
7:30	8:00	0.50			space o				INOTE	<del></del>		, 550	<u>., J</u>											
8:00	6:00	10.00	Cor	ning fro	m 6120	- 6128	(28 ft	in 1	0 hrs)												·			
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			Not	e: NQ	L coring	active,	Omn	i lab	active;	WRF	- Dri	iller &	MV	/D star	ndby									
			Fue	d: 168	gals																			
Doit: T	nto!	24.00	Muc	d usag	e: 0 anc	pac,	0 calc	salt	, 0 anco	bar,	, 0 c	austic	c, 0	xcide,	0 cedar	fibe	r, 0 drill dete	gent,	0 s	alt, O flo	ozan, O	defoa	m	
Daily T	otai	24.00	L																					

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		E	nginee	ring &	Supervi	sion		E	EXAC	TI	Eng	jine	eri	ng, l	nc.			6	918	) <b>599</b> -	9400		
Open	ntor:	Wolver	ine G&O	Co of U	mh, LLC		D	All	Y D	RI	LL	INC	3 R	EP	ORT		· · · · · · · · · · · · · · · · · · ·			-	M1-30	031	
DATE	05/04	WELL	/olverine	Coden	ul 47 2	CONT	ACTOR	, D.D.	T D:	10		- 1		STATE		1	PUD DATE	AF			SUPERVI	BOR	
DAYS F	SPUD		NT OPERAT	ONS		ــــــ	70	TAL D	TRig#	10	PROC	RESS	evie	r, UT	LLING TIME	1 0	7/02/04 ROP	FO	TOMA	TION		teve H	
	34			TIH	}				6,180		<u> </u>	32		<u> </u>	13.50	<u>l</u>	2.4		-	Sand	$\bot$	6,6	50
	r . I	VIS.	l w		ск	PH	SAR	<b>*</b> 0	SOUID	5 %	MAR PA	ם פנ	YP	GELS	DEPTH	I DAT	E/TIME	CHILO	RIDE	s I	CALCIUM	MBT	SALT PPM
9.	В	32	22.	0	1/32	7.0	0.5	Ю.	2.3	3	3		2	1/2	6180	<del></del>	7:30pm	152			40000		<u> </u>
BIT	SIZE	MFG.	TYPE	I MDC	SERIAL	No. I		JETS (	1/32nd")		В	T DA		FOOTAG	HOURS		ROP		= 1				
NO.				CODE	ļ			or or	TFA		<u> </u>	_			L			M	4	RPM RT+MTR	WOB	T B	G
_		DPI DPI	403FD 403	diamno	<del> </del>		· · · · ·		.32		612	_	3180	60	23.50	<del> </del>	2.6	- 1	-	70-80	22-28	++	out
			*****															<u> </u>	$\pm$		<u> </u>	$\Box \Box$	+
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PUMP	MANU	FACTURER	LINER	STROKE	GAL/STK	SPN		HYD	AV DP	_	DC	PUMP	- M	TR DIFF		HHP / IN <sup>2</sup>		ECD	1	11	SLOW 26 spm	PUMP	, .
NO.	146	000	<del>  _</del>	LENGTH		<del> </del>	4			_	_	PRESS		RESS.	<u> </u>				1	2		29врп	
2	+	son 600 son 600	5° 5°	14	3.8	51	+'	94	<del> </del>	$\vdash$	$\dashv$	1400	+	<del></del>	<del>                                     </del>			├	╂	2	380	460	<del> </del>
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80477	MANUE /	VSSEMBLY	DRILL!											GEOL					I		GENER		)
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	bi 5.75			5.00															-1				329-9801
hydrau float si			<del></del>	3.60		<del> </del>		L						GAS	IATA	<u> </u>			-		P Test		7/20
xover		***	+	.07		2.0	000	BOI	10MS UP	TIME		GAS 50	T		YGAS 30		TRIP GAS	3	+		OP Test fety Mea	tina	8/20
				=		=		E	GAS UNITE		F	łOM.		SHO	ws o		ROP (FT/H	R)	_	ast BC			7/25
26 jts -	spiral	HWDP	803	3.10	4.750	2.	125	┢					+			<del> </del>		·	_		erate Pi		******
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Total	BHA:		879	.89		-	1,854	┢		$\dashv$			$\vdash$				· · · · · · · · · · · · · · · · · · ·		╂				
STRING	WT.	BHAWT.	PU W		80 WT.	ROT. T	ORQUE	GR	D. ELEVATI	ON		о кв	#	KB ELE		<del></del>	ERMEDIATE		‡	LAST C		<del></del>	CASING
70		20	140		65			느	5,835	ł		RVE	<u> </u>	5,8	47	<u> </u>	7" @ 543	5	1	70	5435	4-1/2"	<b>@</b> 6650
MD	INCL.	AZIMUTH		SECTION		E+/W		LS	TOOL	M				MUTH		TVD		SECTION	T	N+/8-	E+/W-	DLS	TOOL
6,078	1.70	336.80	6055	0.04	-44.85	-96.4	4 1.	.68	mwd	_	$\dashv$		╀						+				<b> </b>
	<u> </u>				L	<u> </u>					Alty	ACT	VII									<u> </u>	
FROM	T0	HRS		24 HOURS		040-	/F^ ^	12-	0.5:		-					<del></del>		····					
6:00 7:30	7:30 1:30	13.50 6.00	TO	ину по H, chai	n out to	4500' t	(02 11 hru o	verb	J.o nns ull, nota	te o	utre	u II ir Main	123. der c	o nrs, a of trico	avg 2.5 ( very tight	DP con	nections	s. string	tor	muino 4	downho	le .	
1:30	3:30	2.00	Lay	down c	core #5,	proces	s, rec	60.5	5 ft, bit	was	in ga	auge	but (	tamag	ed - ring	cut on g	auge			-			
3:30	6:00	2.50	Chi	ange Bl	HA to 30	ft bbi	& non	fac	e disch	arge	bit,	TIH (	g re	port tin	ne (note:	30 ft bt	of for she	orter "or	) bl	m" tim	es & les	s rotat	ing torqu
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					coring a	ctive,	Omni	lab :	active;	WR	F Dr	ller 8	MV	/D sta	ndby								
		-		d: 302 (		nac (	مادع (	gali	0 200	) ha-	. 0 -		C 0	voide	0 cedar i	hor 0.4	ill data			. 0.4-			
Daily T	otal	24.00	, which	, usaye	. U anicu	pati, t	, carc	odii,	UaliC	, udi	, U C	aust	u, U	acide,	o cedar i	uer, UO	in detel	gent, 0	saf	I, U HOZ	zan, u d	eroam	

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		Ei	ngineeri	ing &	Supervis	sion		E	XAC	ΤE	ngi	inee	ering	3, l	nc.		(91	18) 599-	9400		
Operat	tor:	Wolverin	10 G&O C	o of Ut	ah, LLC		D	All	LY D	RIL	LI	NG	RE	P(	ORT		AP	₩ 43-0	41-30	031	
DATE OR/O	6/04	WELL W/	olverine i	Federa	i 17-2	CONTR			T Rig#1	0		1	NTY, ST. vier. L		***************************************	13PUD DATE 07/02/04	AFE		SUPERVIS	or <b>teve H</b> a	e e h
DAYS F/ S	PUD		T OPERATIO	WS			7	OTAL D	EPTH		PROGR	ESS		DRIL	LING TIME	ROP	FORM	RATION		н. регт	1
	5	<u> </u>	VVOII	ung su	uck pipe				8,207		MU	27 D DA1	TA.		5.75	4.7		Sand		6,6	<del>5</del> 0
WT	Ŧ	VIS.	WL 22.0	$\equiv$	ск 1/32	PH 7.0		ND FO	SOLIDE	-	PV			ELS	DEPTH	DATE/TIME	CHLORI		CALCIUM	MBT	SALT PPM
9.8		32	22.0		1/32	7.0	0.	30	2.3		3 BIT	DAT		1/2	6180	8/4/04-7:30pm	152,0	00 ]	40000	<u> </u>	
BIT SI	Æ N	IFG.	TYPE	CODE	SERIAL	NO.			(1/32nd*) TFA		IN	٦٩	JT FO	OTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	T B	CONDITION
8 6-1			103FD	diamno	+			1	.32	$\exists$	6120	_		60	23.50	2.6	N	70-80	22-28		ring cut
9 6-1	/8" [	OPI	403	diamno	1963	403				$\dashv$	6180	+	$\dashv$	27	5.75	4.7	N	50-60	10-14	$\vdash \vdash$	<del> </del>
			1										工								
PUMP	MANUF	ACTURER	LINER	STROKE	GAL/STK	I SPM	T	HYE	AV DP	CS AVE	c I	PUMP	MTR	DIFF		HHP / IN <sup>2</sup>	ECD	11	SLOW 26 spm	PUMP	1
NO.				LENGTH			+	404		<u> </u>	<u> </u>	RESS.	PRE					2		29spm	
2		on 600 on 600	5" 5"	14	3.8	51	+	194	$\vdash$	$\vdash$	+	1400						1 2	380	460	<del>                                     </del>
Both																					
вотто	MHOLE AS		DRILL S		O.D.	1 1	D.	Ŧ	FORMATIO	N I	M	10	G		OGIC vo	Стного	3Y		GENER RIG	AL INFO	)
		125 x 3.	<del></del>	.90	6.125				Lime	$\Box$								Rig No			979-4644
core bb hydrauli			1	.60		+		╁		-						ļ	<del></del>		. Steve OP Test	(918)	7/20
float su				.02				80	TOMS UP	TIME	8G	GAS		CON	NGAS	TRIP GA	5	1	OP Test		8/20
xover			1	.07		2.0	000	$oldsymbol{\perp}$	36 GAS UNITE			50 ON	<u> </u>	SHO	30 ws	900		Last Sa Last Bo	ifety Mee	ting	8/5
26 jts -	spiral l	-WDP	803	.10	4.750	2.	125		GAS UMIT			UNI				NOP (FIR			perate Pi	pe Ram	+
<del></del>	<del></del>	<del></del>				<del> </del>		╂-		$\dashv$					<del></del>	ļ			perate Bi perate Ar		8/4
																		Last O	JOI ALE AL	A RUBER	0/4
				$\bot$				1		4											<b>-</b>
				+		$\dagger$		╅		十					<del></del>	<del> </del>		<del>                                     </del>		<del></del>	<del> </del>
Total	BHA:		850	.09	66.52	<del>                                     </del>	<del></del>	╁	<del></del>	$\dashv$			-			<u> </u>		<b>!</b>			<del>                                     </del>
STRING \	MY.	BHA WT.	PUW1	_	so wr.	ROT. T	ORQUE	Ē Ģ	5,835	ION	GL T	окв 2			VATION 347	7" @ 54			5435	+	CASING @ 6650
		20							0,000			RVEY	\$								
мр 6,078		336.80	•	8ECTION 0.04	N+/8- -44.85	7	_	DLS 1.68	mwd	MC	Ŧ	INCL.	AZIM	ЛΗ		TVD	SECTION	N+/8-	E+/W-	DL8	TOOL
0,010					1																
FROM	TO	HRS	LAST	24 HOUR	g.					D.	AILY	ACTI	VIIY								
6:00	8:00	2.00			ring BHA	\														.,	
8:00	9:00	1.00		vice ri	g							,									
9:00	10:30 2:00	1.50 3.50	TIH Wa		otm 60 ft	& spac	æ ou	t					· · · · ·						<del></del>		
2:00	7:45	5.75	Cor	ring fro	m 6180	- 6207			7' in 5.7	5 hrs	, avg	4.7 f	ph)								
7:45 8:15	8:15 8:45	0.50			crew ch		dritt :	pipe	attemo	t to !	avdo	wn so	)80e r	ut s	ub. pulle	i 180,000# tota	. 60,000	# over h	ole drag	pipe s	tuck
8:45	6:00	9.25	Wo	rk stu	ck pipe 1	5min, l	kelly	up, a	ttempt	to cir						vork stuck pipe					
		├			to work plened wir						Mint	& had	ckoff	FTA	10am						
				#11, UI	YACU MI	UII 10 0			JUI GILL		~111	- vak	unuii,		Todiii						
		t																			
		1	7		L coring	active,	Om	ni lab	active;	WR	F Dri	iller &	MWI	) sta	indby						
-		+	Fue Mu		gats ie: 0 anc	o pac	0 cal	lc sai	t 0 and	o bar	r, 0 c	austic	c, 0 x	ide.	0 cedar	fiber, 0 drift deta	ergent. 0	salt, 0 fi	ozan. 0 (	defoam	
Daily T	otal	24.00	<u> </u>								, - *								,		

			Eno	ineerli	na & S	upervisi	ion	E	XAC	ΓΕι	ngine	eri	ng, li	nc.		(91	8) 599-	9400		
Operat				G&O Co					LY DI							AP	# 43-4	<b>341-30</b>	031	
DATE		WELL					CONTRA				1		STATE		SPUD DATE	AFE		SUPERVI		
08/0	7/04	PRE		Verine F		17-2	L	COD	T Rig#1	0   F	ROGRESS	evie	r, UT	LING TIME	07/02/04 ROP	FORM	IATION		teve Ha	
	6			Mak	ing up	tools			6,207		0		<u> </u>		#DIV/0!		Sand		6,6	<u>50</u>
						ov. I	PH [	SAND	SOUDS	× T	MUD D	ATA YP	GELS	DEPTH	DATE/TIME	CHLORIE	ES	CALCIUM	MBT S	SALT PPM
9.8	$\dashv$	VIS. 34	$\dashv$	8.8	1		7.0	0.50	2.0		7	4	3/4	5679	8/5/04 8:30pm	153,0	00	45200		
											BIT DA			11011000	ROP	I MTR	RPM	WOB	Z DULLO	ONDITION
BIT SI NO.	ZÉ	MFG.	Ţ	YPE	CODE	SERIAL I	<b>v</b> o.		(1/32nd") r TFA	$\perp$	IN .	OUT	FOOTAGE	HOURS			RT+MTR	<del> </del>	T B	G
	1/8"	DPI	-		diamnd	20164		1	.32		6120	6180	60	23.50	2.6 #DIV/0!	N.	70-80	22-28	++	ring cut
9 6-	1/8"	DPI		103	diamnd	19634	<del>"</del>			十	0100		<del> </del>		10.000				工	
-†-	寸																	<u> L</u>	<u> </u>	<u></u>
									DRAULK		C I PUM		MTR DIFF		HHP / IN <sup>2</sup>	ECD			V PUMP	
PUMP NO.	MAN	UFACTU	RER	LINER	STROKE LENGTH	GAL/STK	SPM	GPM	AV DP	AV D	PRES		PRESS.						29spm	
1	W	ilson 6	00	5"	14	3.8	51	194	ļ	<u> </u>	140	<u>•</u>		<u> </u>			1 2	380	460	+
2	l w	ilson 6	00	5"	14	<del> </del>	-	-	+	-	+	十		<u> </u>			<u> </u>		1 700	L
Both	느		_	RILL S	TRING		<u> </u>	<del></del>					GEOL	OGIC			Ì		RAL INFO	5
вотто	MHOLE	ASSEME		LENGTI		Q.D.	(.1		FORMATIO	N T	MD	7	1	VO	LITHOLOG	ΙΥ	Rig N		(435)	979-4644
					$\dashv$		$\vdash$		Lime	$\dashv$		+							• •	629-9801
					士					工		1		DATA				OP Test		7/20
							ļ		OTTOMS UP	THAE	BG GAS	Ŧ	CON	N GAS	TRIPGA	3	_	BOP Tes Safety Me		8/20 8/5
					$\perp$				GAS UNIT		FROM	ᅷ		WS	ROP (FTA	H)	_	SOP Drill	Jung	8/4
									<u> </u>								_	Operate F		
					1							-			<del> </del>	<u></u>	_	Operate /		ns 8/4 8/4
					+	<del></del>	<del> </del>	$\dashv$		$\dashv$		+		<del></del>			Last	урогало г	a ii ranar	1
			_		$\perp$							土								
							<u> </u>			_		+					╁			+
<b> </b>					+		<del> </del>	-+		$\dashv$		+			<del>                                     </del>		1			<b>T</b>
<del> </del>					+															1
	ВНА			PUW	.00	so Wf.	BOT 1	ORQUE	GRD. ELEVA	TION	GL TO K	<u>.</u>	KB EL	EVATION	NTERMEDIA	E CSG	LAS	T CASING	NE	CT CASING
STRING 70		8HA 1		140	_	65	1.0	51111	5,835		12		5	,847	7" <b>@</b> 54	35	7"	<b>@</b> 5435	4-1/2	<b>@</b> 6650
F											SURV	_		<del></del>		SECTION	N+/8	- E+/V	- DLS	TOOL
MD			HTUME OR SC	TV0	9ECTIO		-96.4			<u> </u>	ID INC	+	AZIMUTH	<del>                                     </del>		SECTION	1 147.6			
8,076	+	<del>""</del>	30.60	6055	-	14,00						工				<u> </u>	1			<u> </u>
											DAILY A	CTIV	ΠY							
6:00	_		HRS 2.00	W	r 24 HOU Ork Sta	ck pipe '	15min.	kelly up	, attemp	t to c	irc, no c	irc, s	stand ke	elly back,	work stuck pipe	off & on	jarring	up, mac	le 4' do	wn once
8:00	-		7.00	RL	Well	Serv Win	eline &	freepoi	nt											
3:00	_		1.00	Ru	n strir	ngshot &	backof	drillstri	ng @ 56 ndition n	79' ir	hWDF	, KI	on drill	ydown 2 ing jars tr	ts, kelly up, resi arrive	unie Iur	UI C			
4:00 8:00	-		4.00 5.00			DP & 13														
1:00	_	30	4.50	Cit	rculate	while w	aiting o	n drilling	jars					40 40						
5:30	6	00	0.50	Dr	illing j	ars arrive	, begin	making	up took	s. W	m jar do	WT) C	n nSn t	or 10-12	#5		<del> </del>			
-	+	$\dashv$		Fis	sh in h	ole: Btm	<b>@</b> 612	8' ; Top	<b>@</b> 5679	ľ										
	上			DF	ore	bit 6.125	x 3.5 x	90'; cor	e bbl 5.75	5 x 3		draul	ic jars 4	.75 x 6.6';	float sub 4.75 x 3	.02'; xove	sr 4.75 x	1.07'; 13	jts HWI	)P 401
	$\bot$	$\bot$				ed lost in														
-	+	$\dashv$		ES	umate	ed sidetra	1 10 KJ	ATTIN COR	n - pout	,,,,,,,,,	<u> </u>									
	士	士		1																
	T	$\bot$		_			stand	by, Omi	ni lab sta	ndby	; WRF	Drille	er & MV	/D stand	<u>y</u>		<del></del>			
-	+	+		FU	ud us:	4 gals age: 1 an	co pac	0 calc	salt, 0 ar	nco b	ar, 0 ca	ustic	, 15 sta	rch, 1 xc	de, 0 c⊯dar fibe	r, 1 drill (	deterge	nt, 0 sal	, 4 floza	in, 0 defo
Daih	/ Tota		24.00			.go														
<u> </u>				*																

			nainear	inn &	Supervis	lon	E	EXAC	TE	nair	100	rina. I	nc.		(9	18) 5	99-9	400		
One-								LY D								Ť		41-30	031	
Opera	eor.	WELL	ne G&O C	20 Or Ut	en, CL.C	CONTRAC						TY, STATE		EPUD DATE	AFE			SUPERVIE		
OBA	06/04		OVERATIO		17-2	L	CDD	T Rig#1		ROGRES		ier, UT	LLING TIME	07/02/04 ROP		MATION			TH. DEPTH	
	37	PRESE	II OPERATIC	ms Trip	)		1	6,050	ľ		0		LLING I IIIL	#DIV/O		_	and		6,6	
										MUD	DAT/	<b>-</b>								
wi		VIS.	WL			7.0	6ANO 0.50	80U08 2.0		PV 7	ΥP 4	GELS 3/4	DEPTH 5679	8/7/04 6:45pm	153.0		-	45200	MBT	SALT PPM
9.8		34	8.8		1/32	.0	0.50	2.0			DATA		3079	1 07704 0.43pm	100,			102.00		
	IZE	MFG.	TYPE	CODE	SERIAL I	VO.		(1/32nd") r TFA	Т	IN	our		HOURS	ROP	МП		PM HMTR	WOB	T B	CONDITION
NO. 8 6-	1/8"	DPI	403FD	diamno	20164	86		1.32	十	6120	618	0 60	23.50	2.6	N	-	-80	22-28		ring cut
9 6-	1/8"	DPI	403	diamno	19634	03			$\Box$	6180		27	5.75	lost in hole	N	<u> </u>				
<b>-</b>					<del> </del>				$\dashv$		<u> </u>	_	<del> </del>	<del> </del>	-	╀			+	╂╾╌┨
_					<u> </u>		HVI	DRAULK			<u> </u>					<del> </del>		SLOW	PUMP	
PUMP	MANU	FACTURER	LINER	STROKE	GAL/STK	SPM	GPM	AV DP	AVD		JMP	MTR DIFF	T	HHP / IN <sup>2</sup>	ECD	十	1	26 spm		
NO.	1054	son 600	5"	LENGTH	3.8	51	194	+	-	_	ESS.	PRESS.	<del> </del>			╁	1	380	29spn	1
2	+	son 600	5"	14	1 33	<u> </u>	134	1								I	2		460	
Both																				
	anc.	SSEMBLY	DRILL S		O.D.	I.D.		FORMATIO	N T	MD			OGIC VD	I LITHOLOG	iÝ	$oldsymbol{+}$		GENER RIG	AL INF	2
BUIT	MITALE /	WOEMOLT	LENGI		<u> </u>			Lime								Ri	g No:		(435)	979-4644
				I					$\Box$		$\Box$			<b></b>		_			(918)	629-9801
<b></b> -			-	-		<u> </u>	-L					GAS	DATA N GAS	TRIP GAS		_		OP Test		7/20 8/20
			+	$\dashv$		<b></b>	-   *	OTTOMS UP	TINGE	BG G	*			TRUE GAV	<u></u>	-		fety Me	eting	8/5
			<u> </u>	_			=E	GAS UNITE	5	FRO	-		<b>W</b> S 10	HOP (FTAH	R)	_		OP Drill		8/4
			<del> </del>	-		ļ	_							<del> </del>		-		perate B		
<u> </u>			+-	-		-	_		+		-		-	<del> </del>		_		perate A		8/4
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			<u> </u>	$\perp$					$\dashv$							1				+
			+	-			$\dashv$		$\dashv$		$\dashv$			<del> </del>		╁				1 1
			+	$\dashv$																
														<u> </u>		1		<del></del>		-
Total	BHA:	BHA WT.	PUW	0.00	so wr.	ROT. TO	RQUE C	ORD. ELEVAT	TION	GL TO	KB	KB EL	EVATION	INTERMEDIAT	E CSG	上	LAST	CASING	NEX	TCASING
70		20	140		65			<b>5,83</b> 5		12			,847	7" @ 54	35	<u> </u>	7 <b>Q</b>	5435	4-1/2	<b>@</b> 6650
	1	Lamas	ul 20	Lecano	N N+/8-	E+/W-	DLS	TOOL	ME		VEY:	AZIMUTH		TVD	SECTION	ı I N	+/8-	E+/W-	DLS	TOOL
6,078	1.70		0 <b>605</b> 5	0.04	44.05	<del>                                     </del>	_					740000111								
					<u> </u>	<u> </u>		<u> </u>	1		l		<u></u>		<u> </u>			l	<u> </u>	
FROM	T fo	HRS	140	T 24 HOU	R8:				D	ALY	ACTI	VITY								
6:00	_				jaming Bl	IA; scre	w in su	ıb, jars,	5 - SI	DC, H	WDF	as abo	ve							
6:30					h-a-l7		into 5	h et 50"	70'									<del></del>		
10:00	7				break cin					id not	sust	ain, pum	ped 120	obl crude oil, sta	ged ove	er 6 h	urs, ja	arred up	& dov	m, no suc
11:00	-													& core bbl in ho						
1:30	-				btms up															
2:00	6:0	4.00	TC	H, lay	down dri	g jars, s	crew in	sub, 2 j	KS HV	WUP,								,		
<del>                                     </del>	<u> </u>	+	FK	SH LE	FT IN HO	LE: Btrr	@ 612	28' ; Top	@6	050'										
			DP	1 core	bit 6.125 x	3.5 x .9	O'; core	bbl 5.75	x 35	.82'; h	ydrau	tic jars 4.	75 x 6.6'; 1	oat sub 4.75 x 3.	02'; xove	¥ 4.7	5 x 1	07; 1 jt	HWDP	30.88;
	1	+	+-		d lost in t		us for 6	oh Mu		5 000	· Kai	aht Oit T	onte es n	nn = \$48 nnn +-	tal					
<del></del>	-	+	_		d lost in r d sidetrac					J.,UUU	, MIE	grit Ull I	JUNG #3,U	00 = \$48,000 to	w##					
	上	士																		
		1				standby	, Omni	lab stan	ndby,	WRF	Drille	er & MW	D standb							
-	-	+-		iel:252		o nac o	raic e	alt () and	co he	r O cs	austic	: 0 starr	th 0 xcids	, 0 cedar fiber,	O drill de	tero	ent. (	) sait. 0	flozan	0 defoar
Daily	Total	24.0		-u uad	30. U GR	_ pao, 0	~v dt	, v ark				. ,	,							

					• •				EY/	\C1	En	aiı	1001	ing,	lnc:	· <del></del>		/918	599-9	2400	·	
						Supervis	ion	DA							ORT					41-300	31	
Opera	tor:		<b>iverine</b> Ell	GRO C	of Uta	in, LLC	CONT	RACTOR			711-1			Y, STATE		EPUD DATE		FE		SUPERVIS		
08/	09/04		Wol	verine F		17-2		CE	DT R	ig#10	)			er, UT		07/02/04 ROP		ORMAT	TENNI		eve Ha	sh
DAYS F/	SPUD 38	P	RESENT	OPERATION	ws" WO	Ċ		TOTA	5,40	ю	PR	OGRE	:ss 0	"	RILLING TIME	#DIV/0!	- 1	CHARL	, N		6,65	io j
	36				110.							au.	DAT									
w		VI	8.	WL.	工	CK	PH	SAND	_	OLIDS	×	PV	ΥP	GELS		DATE/TIME	<del></del>	ORIDE		CALCIUM	MBT S	ALT PPM
9.1	3	4	3	4.6		1/32	7.0	0.50		0.8	_ <u>_</u>	9	17		5679	8/8/04 3:00pm	10	1,000		47000		
віт І	SIZE	MFG.	1	YPE .	IADC	SERIAL	NO.	JE	TS (1/32n	ď)	$\top$	IN	DATA		GE HOURS	ROP	T A	WTR	RPM	WOB		ONDITION
NO.	_				CODE		ne		or TFA		1	3120	618	0 60	23.50	2.6	$\dashv$	N	70-80	22-28	T B	ring cut
-+-	1/8" 1/8"	DPI DPI	-		diamnd		$\overline{}$		1.32		-	3180	+	27	5.75	lost in hole	_	N	10 00			
1	1/6	Uri	+-	<del>~</del>	CHETTRIC	1000					T											
														$\perp$	1					<u> </u>	<u> </u>	
									IYDRA				PUMP I	MTR DIFF	. 1	HHP / IN <sup>2</sup>	ECE	,	11		PUMP	
PUMP NO.	MA	NUFAC1	TURER	LINER	STROKE	1	SF	M GF	^	V DP	AV DO		RESS.	PRESS.					2		29spm	
1	٧	/ilson	600	5"	14	3.8	5	1 19	14			4	400		<del> </del>		<b>├</b> ─	-	1	380	460	-
2	+	/ilson	600	5"	14	<del> </del>	ـ		+			+			+	<u> </u>	┼	┪	2		460	
Both	1_			ORILL S	TOKP	<u></u>								(3-7	LOGIC					GENER	AL INFO	5
ВОТ	OMHOL	E ASSE		LENGTI		O.D.		I,D.	FOR	MATION	П	M	0		TVD	LITHOLO	GY	#			INFO (405)	70.4044
					+				U	ime	$\dashv$								Rig No	): o. Steve		979-4644 829-9601
<u> </u>							┼				十							1		OP Test	(0.0)	7/20
-					+		十		воттой	MS UP 1	TIME !	BG	GAS [	GJ C	S DATA JAN GAS	TRIP GJ	48	$\equiv$	Next B	OP Test		8/20
											$\Box$				HOWS			_		afety Me	eting	8/8
					#		#		5243	UNITS	7	FR	OM		10	ROP (FT)	HIR)	=		OP Drill perate P	ine Pam	8/4
<u> </u>					-		-		-		+									perate B		+
<u> </u>					$\dashv$		╁╌		-		十					+				perate A		8/4
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<u> </u>							+-		├		+											+
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																						<u> </u>
	BH			PUW	0.00	SO WT.	90	, YORQUE	CIPIT S	ELEVAT	10N	G 1	ОКВ	KB	ELEVATION	NTERMEDIA	TÉ CSG		LAS	CASING	NEX	TCASING
_	GWT.	+	A WT. 20	140	_	65	<u> </u>	TONGOL		,835			12		5,847	7" @ 5	435		7.6	5435	4-1/2	<b>@</b> 6650
F												SU	RVEY:	5								
MD	_	_	AZIMUTH		SECTIO					TOOL	MD	$\top$	INCL.	AZIMUT	H	TVD	SECT	TION	N+/S-	E+/W-	DLS	TOOL
6,07	8 1	.70	338.80	6055	0.04	-44.85	+	3.44 1	.68	mwa	┢	十										
<b> </b>											D	AJLY	ACTI	VITY						.,		
FRO	_	то	HRS		T 24 HOU		la io		, in a	h 2 i	6 LW	VDP										
6:0 9:0	-	:30	3.00 7.50	PI	711, 1819 I 10 ik	/ down dr s. 2-7/8" E	ue t	o, screw bastino	er, xo	<u>, 4 }</u> T#H	on 8	3 str	is, tao	ledge.	circ 14 jts	to birm, tag fish	<b>@</b> 605	50'				
4:3		:00	0.50	cin	culate	btms up		-														
5:0	_	:00	1.00	RL	J Halc	o, safety	mtg,			29 bb	l cmt	slur	ту, 4 t	ofw & 3	4 bbl mud	set 165 sx side	track p	plug	from T	OF @ 6	050° to	5285' in '
6:0	_	:30	0.50			stands to						ueill 1	WOO	24 hrs	hofore dri	ling consent						
6:3	-+-	:30	1.00 0.50			e bitms up n 34 jts D		vigent	CITE OF	i Dan	is up,	WIN.	****	Z7 183	COLOR UT	ling cement						
7:3 8:0		2:00	4.00			vith DP &		own 10	ts 2-7/	/8" tb	g											
12:0		:30	1.50	RI	H w 2	2 jts HW	DP &	4 new l	IWDP	- tot	al 26								.,			
1:3	0 6	3:00	4.50	RI	J Blac	k Jack In	spec	tion, ins	pecting	g HV	VDP (	<u>@</u> re	port t	me, W	OC until 7	mc	· · · · · · · · · · · · · · · · · · ·					
-	+			<del> </del>		<u></u>		<del></del>														
$\vdash$	+			Nr	ote: sic	detrack o	lug C	lass G -	Prem	ag 3	00 - 1	65s	x - 17	ppg, 0.	99 cfps, 3.	78 gps mix wtr,	.75% (	CFR	-3			
<b> </b>	$\top$																					
				<del></del>			star	dby, Or	nni lab	star	ndby;	WR	F Drill	er & M	WD stand	y					<del></del>	
<b>—</b>	_			Fu	el:252	2 gais	~~	0 140	alc es	# O	2000	har	1 200	o drill	13 starch	2 xcide, 1 drill d	leteroe	ent. C	) salt.	flozan.	0 defo	am
Dei	y Tota	al	24.00		uu USE	age. Idn	u pa	D, 140 (	AIR 30	., 0	<u></u>			· · · · · · · · · · · · · · · ·								
John	,		_ ,	<b>.</b>																	_	

		En	gineeri	ng & S	Supervisi	ion		EXAC.	T Er	ngi	nee	ring,	Inc.			(91	8) 599-	9400		
Operat	or:	Wolverin	e 680 C	o of Uta	h, LLC			LY D								API	# 43-0	141-30	031	
DATE		WELL				CONTRAC	TOR			-	COUN	TY, STATE		SPUD DAT	E	AFE		SUPERVI	OR	
08/1			IVERINE F		17-2	· · · · · ·		DT Rig#1		ROGRE		ier, UT	TILLING TIME	07/02/0	4	FORM	ATION		TH. DEPTH	
3:		- KESEN		me Dr	illing			5,580			8		6.00	1.3			Cemen	- 1	6,6	
											DAT			·			1		Tresel	
9.6	-	vis.	M. 16.0			эн ).2	SAND tr	souds 1.0	*	15	23			8/9/04 9:45pr		HLORID		37000	MBT	SALT PPM
9.0		28	10.0	<u> </u>	132   8	.2	u .	1 1.0	<u> </u>		DAT		0 3020	1 0/3/04 5.43()	". L	50,00	<u>~</u> _	07000		
BIT SIZ	Œ M	FG.	TYPE	IADC	SERIAL N	Ю.		S (1/32nd*)	Т	IN	OU		GE HOURS	ROP		MTR	RPM	WOB		ONDITION
NO. 8 6-1	/0° F	PI 4	03FD	cope	20164	R6		or TFA 1.32	٠,	3120	618	30 60	23.50	2.6		N	70-80	22-28	T B	ring cut
9 6-1		PI	403	diamnd	19634			1.04	_	B180	<del>  "</del>	27	5.75	4.7		N		† <del></del>	TT	LOST
10 6-1	-		-DS+		MLOO		13	13 1	3 !	5572		8	6.00	1.3		Υ	0+130			
													1				<u> </u>	<u>l</u>	<u> </u>	1
								YDRAULK											PUMP	
PUMP NO.	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	GPW	AV DP	AV DO	1	UMP RESS.	MTR DIFF	<b>'</b> ]	HHP / IN <sup>2</sup>	6	CD	1 2		29spm	<del>. </del>
1	Wils	on 600	5"	14	3.8	67	255	5		+	280	25					1	380		
2		on 600	5"	14						I							2		460	
Both										I	$\Box$					]				
			DRILL S									GEC	LOGIC					GENER		)
	MHOLE A:	SEMBLY	LENGTI		0.0.	I.D.	-	FORMATION		MC	-		TVO	штно	LOGY		Ria No		(435)	979-4644
6-1/4 Bi		gr)(.56 r		.47	6.250 4.750		$\dashv$	Cemen	+					<del> </del>	<del></del>					629-9801
dbl pin :		gi /(.50 i		.88	4.125								·	<b>†</b>				OP Test		7/20
monel [			<del></del>	.82	4.750		-	BOTTOMS UP	TIME	9G G	AS	GA CC	S DATA DNN GAS	TRIP	GAS		Next B	OP Test		8/20
MWD F	ulsar		5	.64	4.750								TOWS				Last S	afety Me	eting	8/9
Float su	,b		3	.00	4.750			GAS UNITE		FRC	W.		10	ROP (F	TARR)			OP Drill		8/4
26 jts -	spiral I	IWDP	800	.73	4.750		2.125		-									perate P	·	
<u> </u>			ļ						+					<del></del>				perate B perate A		8/4
			-	-		<del> </del>	-		+					+			Last C	perate A	I II IMPOR	1
<del> </del>				十			1		+		$\neg$									
																				<b>_</b>
						ļ											<b></b>	<u>-</u>		-
				_					-+		-			<del> </del>			<del>                                     </del>			<del> </del>
Total i		BHA WT.	859 PUW1		SO WY.	ROT. TO	RQUE	GRD. ELEVAT	ION	GL TO	КВ	KBI	LEVATION	NITERMED	NATE CSG	,	LAS	CASING	NEX	TCASING
70		22	120		65			5,835		12	2		5,847	7" @	5435		7.0	5435	4-1/2	<b>@</b> 6650
											VEY							,		
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W-	DLE	TOOL TOOL	MD	+	NCL.	AZIMUTI	-	TVD	SE	CTION	N+/8-	E+/W-	DLS	TOOL
	├	†			<del> </del>		+	inec		+			<del>                                     </del>	· - <del></del>	-†-		<u> </u>	1	1	1
	<u> </u>								D/	ULY	ACTI	VITY								
FROM	TO	HRS		24 HOUR																
6:00	8:00	2.00				/DP, LI	) 1 HV	VDP, insp	ect ri	g 6"8	k 8" [	OC + ke	lly + subs						<del></del>	
8:00	9:00	1.00			ervice rig	ne hour	ino to	1 3/4 da-	, ch-	LMA"	n bed	torice		·				-		<del></del>
9:00 10:30	10:30	-						1-3/4 deg					ine test N	WD, tag up (	btm	of 7"	CSO			
2:30	8:00	<del></del>												VOC 24.5 hrs		<u> </u>				
8:00	9:00	1.00			solid btm															
9:00	12:00		Dre	968 CM	t plug to	5572', t	ard pl	lug, orient												
12:00	6:00	6.00	Beg	gin sid	etrack @	5572	in 1.6	degr hole	, AZ 1	150 c	ieg, f	ormatio	n shale; b	gin time drilli	ng @ (	5 min	per in			
<u> </u>	<del>                                     </del>	<b> </b>	├																	
<b>—</b>	<del>                                     </del>	+-	<del> </del>		<del></del>															
-	<del> </del>	+	<del>                                     </del>										<del></del>							
<b></b>		<del>                                     </del>	<del>                                     </del>						•											
			No	te: Red	cd 160 jts	, appro	x 7000	0' of 4-1/2	11.6	ppf l	N80 I	TC 8rd	new Koep	pel seamless	casing	g fron	n B&L (	<b>3</b> \$8.92	n FOB	locn
			No	te: NQ	L coring (	release	d 8/9,	Omni lab	relea	sed	B/9; V	VRF Dr	iller & MW	D active				_		
	<u> </u>			el: 210													4.66			
		<u> </u>							o bar	, 0 a	nco c	inii, 0 s	arch, 0 xc	ide, 0 drill dete	ergent,	u sa	rc, O 1102	zan, Ude	meore	·
	Fotal .	24.00	ı 3-1	12" DP	- total jts	on loc	11 = 19	N.												

- c 65 Mg

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		E	ngineer	ing &	Supervi	sion		E	XAC'	ΤE	ngir	100	rin	g, lı	nc.				(91	8) 59	9-9	400		
Operat	or:	Wolverle	ne G&O (	io of U	teh, LLC		D	All	Y DI	RIL	LIN	IG	RE	EPC	ORT				AP	<b># 43</b>	-0-	41-300	31	
DATE		WELL				CONT	RACTO			_			NTY, 51			1	PUD DATE		AFE			SUPERVIS		
08/1	1/04		<b>DIVERINE</b> TOPERATION		ad 17-2	1		OTAL DE	T Rig#1		PROGRE		vier,		LING TIME	<del>  "</del>	7/02/04 ROP		FORM	ATION	!		H DEPT	
4	0	<u> </u>		Tri	ip				5,665			15		1	7.25	<u> </u>	4.9		L	Sha	le		6,6	50
			I WL		ск	PH		WID .	SOLIDS	. T	MUD PV	DAT		GELS	DEPTH	T DAT	E/TIME		HLORIC	es I		ALCIUM	MBT	SALT PPM
9.6	+	VIS. 39	16.0	, †	1/32	9.2		tr	1.0	~	15	2		10/16	5528	<del></del>	9:45pm	<del> </del>	150,0	-		37000		
											вп	DAT												
BIT SU	E M	FG.	TYPE	CODE	1	NO.			(1 <i>132</i> nd") TFA	П	IN	OL	UT FO	DOTAGE	HOURS		ROP		MTR	RPI RT+M		WOB	T	G
8 6-1	/8" C	PI 4	103FD	diamn	d 2016	486		1.	.32	$\Box$	6120	61	80	60	23.50		2.6		N	70-1	80	22-28	Ш	ring cut
9 6-1		PI	403	diamn			40	1	1	_	6180 5572	56	-	27 93	5.75 23.25	├	4.7		Y	20+1	30		╂╼┼╴	LOST
10 6-1	A-   S	TC	FDS+	<del> </del>	MLO	AUG	13		13   1	3	30/2	30	-	30	23.23	<del> </del>	4.0		† †	201	30		$\dagger \dagger$	1
								HYC	RAULK	:s												SLOW	PUMF	
PUMP	MANUF	ACTURER	LINER	STRON	1	SF	W	GPM	AV DP	AV		JMP ESS.		OFF ESS.		HHP / IN <sup>2</sup>		E	CD	П	1 2	26 spm	29spr	1
NO. 1	Wilse	on 600	5"	14	3.8	6	<del>,</del>	255			_	280	_	25						1		360		
2		on 600	5"	14																2			460	
Both			<u>L</u>	<u> </u>	<u> </u>	<u> </u>				<u> </u>			<u> </u>					<u> </u>		<u> </u>			KT 242	
вотто	MHOLE AS	SEMBLY	DRILL:		G 0.D.	_	I.D.	+	FORMATIO	N I	MO			GEOL T	OGIC VD		LITHOLOG	3Y_		$\vdash$		GENER RIG	AL INF	<u> </u>
6-1/4 B			<del> </del>	1.00	6.25	_		I	Cemen											Rig				979-4644
<del></del>		gr)(.56	1	3.47	4.75	+		+		$\dashv$			<u> </u>				· <del>··············</del>					Steve P Test	(918)	629-9801 7/20
dbl pin : monel (		<del></del>	+	1.88 3.82	4.12 4.75	-	-	-	TOMSUP	TIME I	BG G	AS		GAS (	N GAS	<del>!</del>	TRIP GA					OP Test		8/20
MWD F			+	5.64	4.75	+		Ĭ												Last	Sa	fety Mee	ting	8/9
Float su			+	3.00	4.75	-		+	GAS UNITS	-	FRO	N.		840	o	<del></del>	ROP (FT#	# <b>#</b> )		_		P Drift		8/4
26 jts -	spiral H	WDP	800	0.73	4.75	4-	2.12	25		-+			$\vdash$		<del></del>	+	·					erate Pi erate Bi		
			<del>                                     </del>	$\neg \dagger$		+		╅		寸												erate Ar		8/4
										$\Box$						oxdot								ļ
				-		╂		+	·	-			⊢		<del></del>	┼				-				
			<del> </del>	$\dashv$	<del> </del>	╫		╅		$\dashv$			$\vdash$			+				$\vdash$				
			<b>1</b>	士	···········			1																
			ļ							_			<u> </u>		<del></del>	—				_				<del> </del>
Total STRING		BHA WT.	859 PUW	9.54	SO WT.	ROT	TORQU	JE GI	RD. ELEVAT	IÓN	GL TO	KB	$\vdash$	KB ELE	VATION		ITERMEDIA	E CSG	3		AST (	ASING	NE	TCASING
70		22	120		65	$\mathbf{L}$			5,835		12	!		5,	847	<u> </u>	7" @ 54	35		7	. 0	5435	4-1/2	<b>@</b> 6650
		T		SECTION		1 5			TOOL	MI		VEY		MUTH		170		Tes	CTION	N+/	S.	E+/W-	DLS	TOOL
MD 5,470	3.60	AZIMUTI 203.6		1	ON N+/8- O -40.15		/w- 3.25	1.33								5571		$\mathbf{T}$	4.03			-104.4	_	
5,533	1.70		5510						mwd	5,6	27 1	.90	31	4.60		5605			4.72	-43.	69	-105.23	3.97	mwd
FROM	TO	HRS	T 746	T 24 HOL	юе.					D	ALY	ACT	MI											
6:00	9:00	3.00			illing from	5580	to 55	90; 1	00% for	mati	on @	559	0, nc	w sic	letracked									
9:00	11:15	14.25			stide & ro											ect 6 ft	away fro	m oi	id ho	e <b>Q</b>	566	i5'		
11:15		_			& chain 5 ement co											uiv tank	(cannot	miy	mud	thra	hor	ner intr	active	e system)
12:00	6:00	6.00	<del>  "</del>	amp C	circii CO	real fill	wetter.	miud,	, na pres	nUII	. 30,78	yc, '	- A RU	,,,,,,,,,,	ond picil		7000 HOL					A16.		,
			1												<del></del>				<b></b>					<del> </del>
<del> </del>	<del>                                     </del>	+-	+			·																		· · · · · · · · · · · · · · · · · · ·
<u> </u>	<u> </u>	1-	<del> </del>																					
	<del> </del>	+	+										-								_			
			No	ote: V	VRF Drille	er & M	WD a	active	1															
					0 gals											4 1	.00 -4-1-		<u> </u>		l	64-	<b>.</b>	
Deite	[	24.00			age: 0 and P - total j					xo ba	ır, 3 a	nco (	anıı,	o sta	rcn, 1 xci	oe, 1 di	ııı deterç	jent,	, U <b>S</b> a	ut, 4 f	ΟZ	an, u de	roam	
Daily 1	otali	1 24.U	1 3-	1/2 L	r - wwi	is UII	- III	- 190																

		Eı	ngineer	ring &	Supervis	ion						ring, l				(91	8) 599-	9400		
Operator	r.	Wolverin	680 (	Co of Ut	sh, LLC		DA	LY	DRI	LLIN	IG I	REPO	ORT			AP	₩ 43-1	)41-30	031	
DATE	10.4	WELL		·····		CONTRAC		DT C:	*4.		1	TY, STATE		SPUD D		AFE		SUPERVI		
08/12/	U4		Verine		17-2	i		DT Rig	FTU	PROGRE		ier, UT	LING TIME	C/7/02/ ROP	U4	FORM	ATION		teve	
41				Drillin	ng		<u> </u>	5,772		1	07	1	2.00	8.9			Lime		6	,650
	_							7			DAT								l	
9.5+	╅┈	vis.	7.6			PH 7.0	SAND 0.00		.5	6 6	ур 7	GELS 3/5	DEPTH 5688	8/9/04 9:45p	_	150.00		37000	MBT	SALT PPM
										•	DATA									
BIT SIZE		FG.	TYPE	CODE	SERIAL.	NÒ.		S (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP		MTR	RPM RT+MTR	WOB	DUI	T CONDITION
8 6-1/8	r D	PI 4	103FD	diamnd	20164	86		1.32		6120	618	0 60	23.50	2.6		N	70-80	22-28	††	ning c
9 6-1/8	r o	PI	403	diamnd	19634	103				6180		27	5.75	4.7		N				LOST
10 6-1/4			FDS+		MLOO		13	13	13	5572	566		23.25	4.0		Y	20+130			
7R 6-1/4	" SE	BS S	EB709	617Y	10556	908	13	13	13	5665	<u></u>	107	12.00	8.9		Y	50/130		Ш	
PUMP I	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	H/\ GPM	DRAU		/DC P	UMP	MTR DIFF		HHP / IN <sup>2</sup>	_	ECD	1 1	SLOW 26 spm		P
NO.		NO FOREIT		LENGTH							ESS.	PRESS.			$\perp$		2		298	om
		on 600	5"	14	3.8	69	262		_	12	250	25		<del></del>	4		1	380	_	
2 Both	Wilso	on 600	5"	14	<del> </del>	<del> </del>	┼	+	+-		$\dashv$				+		2	<u> </u>	46	0
Bour I			DRILL!	STERNAG	<u> </u>		<u> </u>					GEOL	ogic					GENER	AI IN	ΕO
BOTTOMH	IOLÉ AS		LENG		O.D.	1.D.	士	FORMA	ION	MD			VD.	штн	LOGY				INFO	
3-1/4 Bit		<del>.</del>		1.00	6.250	ļ	_			<b> </b>	-			<del> </del>			Rig No		•	97 <del>9-464</del>
Viotor (1.7		gr)(.56 r		1.88	4.750 4.125		$\dashv$			<del> </del>	$\dashv$			<del> </del>				OP Test	(918	7/20
tbl pin xo monel DC			_	3.82	4.750	<del> </del>	一	оттома	PTIME	BGG	AS I	GAST	T GAS	TRI	GAS			OP Test		8/20
WWD Put	• • • • • • • • • • • • • • • • • • • •		<del></del>	5.64	4.750				· · ·	550								afety Me	eting	8/11
Float sub			;	3.00	4.750			GAS UK	пs	FRO		SHO	o sw	ROP	FT/HR)		Last B	OP Drill		8/11
20 jts - sp				5.22	4.750	2	.125			<b> </b>	$\dashv$							perate P		
Griffith Dr 6 jts - spir			<del> </del>	9.97 5.51	5.750 6.750	,	125			1	$\dashv$			<del> </del>				perate Bi perate A		
o jes - spii	(A) (1)	TUF	10	3.31	0.750	-				<u> </u>	$\dashv$			<del> </del>			Last O	perate A	нима	1 04
											二									
										ļ				<b></b>						
				+		<del> </del>	$\dashv$				$\dashv$	· · · ·					ļ			
			<del> </del>	$\dashv$		ļ	-			-	$\dashv$			<del> </del>						
Total BH	łA:		889	9.51		t —					_			<del>                                     </del>						1-
STRING WT.	-	HAWT.	PUW		so wt.	ROT. TO	QUÉ	GRD. ELEV		GL TO	_		VATION	INTERME				CASING	1	EXT CASING
70	<u> </u>	22	120	<u>'                                    </u>	65	<u></u>		5,83		12 S110	VEYS		147	/ 9	5435	·	/" @	5435	4-1/	2" @ 6650
MD	INCL.	AZIMUTH	TVD	SECTION	N+/8-	E+/W-	DLS	100			ICL	AZIMUTH		TVD	Т	SECTION	N+/8-	E+/W-	DL	S TOOL
					-40.15	T	_	_				273.10	<u> </u>	5571	4			-104.4		
5,533	1.70	183.70	5510	-4.90	-42.98	-104.14	3.82	2 mw	_			314.60		5605		-4.72	43.69	-105.23	3.9	7 mwd
FROM	ΤΌ	HRS	LAS	T 24 HOUR	<b>6</b> :					DAILY /	ACTIV	птү								
	1:00	5.00	то																	
	6:00	7.00					new n	ntr, adju	ist, T	IH, test	MW	), acrub	sidetrack	, wash to btn	1					
6:00	6:00	12.00	Dri	illing fro	om 5665	to 5772														
		-																		
								· · · · · · · · · · · · · · · · · · ·												
		ļ	<u> </u>																	
		<del>                                     </del>	<b> </b>																	
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			<u> </u>	4 44	)F O **	0.1545														
		<del> </del>		el: xxx	RF Driller	& MW	activ	е					<del></del>			· · · · · · · · · · · · · · · · · · ·				
		<del> </del>				oel 70	calc s	salt. 0 a	nco h	par. 0 a	nco d	rill 14 st	arch 1 x	zide, 1 anco	oac.	0 drill d	etergen	t. O salt.	O flo	zan, 0 de
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		E	ngineer	ing &	Supervis	ion						ering, l				(91	8) 599	9400			
Operat	or:	Wolverla	10 GEO	o of Ut	eh, LLC		D/	AIL'	Y DF	RILL		REP	ORT			AP	<b>#</b> 43-	041-3	0031		
ÄTE		WELL				CONTR			<b></b>		- 1	NTY, STATE		SPUD DA		AFE		SUPER			
08/1	3/04		T OPERATION		d 17-2	Ц.,		DDT AL DEPI	Rig#10		Se	vier, UT	ILLING TIME	07/02/0	04	FORM	IATION		Steve		sh
4:	2			Drillir	ng		1	5,9	934		162		12.00	13.5			Lime			6,65	0
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WT		VIS.	WL			PH	SANE		SOLIDS			P GELS	DEPTH	DATE/TIME		CHLORIC		CALCIUM	TEM	SA	LT PPM
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SIT SIZ	E M	FG.	TYPE	IADC	SERIAL	NO.	j	ETS (1/3	32nd")	B	T DAT	A UT FOOTAG	HOURS	ROP		MTR	RPM	WOB	D	ULL CO	NOMON
ю.				CODE				or TF		<del></del>			1.00	<del></del>		<del> </del>	RT+MTF		干	В	G
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							1	HYDR	AULIC	S								SLO	N PU	MP	
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-1/4 Bi Notor (1		gr)(.56 ı	†	3.47	4.750	1		-		+-	·····		<del></del>	<del> </del>				o. lo. Stev		-	
bl pin x		2://:	1	.88	4.125	<del></del>				1			<del></del>					OP Tes			7/20
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ioat su			<del> </del>	3.00	4.750	-		G.	AS UNITS	-	HOM		10	ROP	FTAIR)			OP Drill		_	8/12
0 jts - 1	•		615		4.750	+	2.125					<u> </u>	····	<del> </del>				perate l			8/12
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70		22	120	<u> </u>	65	<u>.                                    </u>		<u> </u>	5,835		12	<u> </u>	847	<u> 7° @</u>	5435		7.0	<b>2</b> 5435	14	1/2" (	<b>B</b> 665
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W	, I D	LS	TOOL	SI MD	IRVEY	S		TVD	SE	CTION	N+/S-	E+/W	- 1 -	ns I	TOOL
					-41.66					5,749		318.60		5727				0 -107.	$\overline{}$		mwd
5,717			5695							5,782	2.40	315.00		5760	-1	1.36	-37.9	9 -108.	73 0	.46	mwd
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			No	te: rec	eived 2 -	4-3/4"	adj m	otors						g for short jt one equipme		OPI					
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			No No Fu	te: rec te: Wi el: xxx	eived 2 - RF Driller gals	4-3/4" & MW	adjm /Dact	otors tive	last nit	e fr Wi	RF Ca	sper, sen	t back alf		ent to C		demen	l () salt	5 flo	zan	Q defo

			E	nginee	ring &	Supervis	ion		E	XAC	TI	Enç	gine	eri	ng, I	nc.				(91	8) 599-	9400		
	rator	:		ne G&O	Co of U	teh, LLC		D/	<b>VIL</b>	Y D	RI	LL	INC	R	EP(	ORT				AP	# 43-(	41-30	031	
DATE OS	3/14/0	04		olverine		al 17-2	CONTRA	C		Rig#1	0		s		STATE r, UT			SPUD DATE 07/02/04		AFE		SUPERV	isor S <b>teve</b> H	ash
	43		PRESEN	IT OPERAT	ions Drilli	ing		TOT	AL DEF	тн 120		PRO	GRESS 186			LLING TIMI : 23.50		7.9		FORM	ATION Sand	A	лн. рерті 6,6	
	ΝT	_	VIS.	1			a. 1	4.77				_	ען פט											
	0.6	上	38	4.0		1/32	PH 7.0	0.50		SOLIDS 1.8		10		13	GELS 6/8	604 5	1	3/04 8:00pm	+	HLORID 120,00		41000	MBT	SALT PPN
BIT	SIZE	T 1/4	FG.	TYPE	IWDC	SERIAL	NO I		ETS (1/	2751		В	IT DA	TA	FOOTAGE	HOUF S	<del>,                                     </del>	200						
NO.		↓			CODE	<b> </b>			or TF	<u> </u>		-"	_				igspace	ROP		MTR	RPM RT+MTR	WOB	T B	G
	6-1/4" 6-1/4"	+		EB709 EB709	617Y 617Y			13	13		3	578		786	334	1.00 34.50	+	9.7		Y	50/130 50/130	20	++	-
7		L											_				匚						11	
<u> </u>		1				<u> </u>		-	IVN	ZAULK	<u></u>				<u> </u>	<u></u>	<u></u>			<u> </u>		61.04	V PUMP	<u> </u>
PUMI NO.	P M	ANUF	ACTURER	LINER	STROKE		SPM	GF		AV DP		DC	PUMP		TR DIFF	<del></del>	HHP/I	V <sup>2</sup>	E	CD	1		n I	
NO. 1	士	Vilse	on 600	5"	LENGTH	3.8	64	24	13		$\vdash$	-	PRESS 1450	-	RESS.	<del></del>			$\vdash$		5950°	350	40spm	+-
2	-	Vilso	on 600	5"	14							$\dashv$		I							5950		600	
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		LE AS	SEMBLY	LENG		O.D.	1.0		FC	RMATIO	N		MD	T		vo		LITHOLOG	3Y				AL INFO	,
3-1/4			os\/ 56 s		1.00 3.47	6.250		_				-		+			╀				Rig No		, ,	979-464
dbl pi		o de	gr)(.56 r	<del></del>	1.88	4.750 4.125						<u> </u>		+			_				Cell No		(918)	7/20
mone	) DC			28	3.82	4.750	<del></del>		вотт	OMS UP	IME	BC	G GAS		CON	NGAS		TRIP GA	S			OP Test		8/20
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lost 20 jts	- spii	ral H	WDP		3.00 5.22	4.750 4.750		2.125	- C	AS UNITS		F	ROM	F	1	•	F	ROP (FTA	# <del>?</del> )		Last Bo		ipe Ram	8/13
Griffit	h Drk	g jan	S	29	9.97	5.750								I									lind Ram	-
6 jts -	- spira	al HV	VDP	185	5.51	6.750		2.125				<u> </u>		$\vdash$			├-				Last Op	erate A	nnutar	8/4
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				<b></b>	$\dashv$						$\dashv$			+			-	<del></del>						-
STRIN	BHA		HA WT.	889 PUW		SO WT.	ROT. TO	RQUE	GRD.	ELEVATI	ON	GŁ	то кв	┶	KB ELE	VATION	$\vdash$	INTERMEDIAT	E CSG		LAST	ASING	NEXT	CASING
7	0	<u> </u>	22	120	<u> </u>	65				5,835			12	<u> </u>	5,8	47	<u> </u>	7" @ 54:	35		7" @	5435	4-1/2"	<b>@</b> 665
MD	IN	ICL.	AZIMUTH	TVD		N+/8-	E+/W-	DL	s	TOOL	M		INCL.		MUTH		TVD		SEC	TION	N+/S-	E+/W-	DLS	TOOL
<b>5,68</b> 5	_		335.70 337.50		-7.06 -8.59					mwd	_	_	2.40	+	18.60		5727		$\overline{}$	0.05			3.12	mwd
3,717	/   2.	80	337.30	3093	-0.38	1-40.25	-107.0	0.8	<i>*</i> 0 <u>L</u>	mwd			2.40 Y ACT	_	5.00		5760		-11	.36	-37.99	-108.73	3 0.46	mwd
FROM	_	ro	HRS		24 HOUR				•															
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9:30		:00	8.50			46 - 6120	)																	
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	Total		24.00			- total jts										,	-, -,	,					,	

		E	ngineeri	ng & 3	Supervis	ion			ACT				•				(	918) 5	99-9	400		
Operat	or:		ne G&O C	o of Uta	ah, LLC		D	AILY	DR	ILL	INC	R	REP	OR T			Al	PI# 4	3-0	41-30	031	
DATE 08/1	5/04	WELL VA/	olverine F	ederal	17-2	CONTRA		DDT R	ia#10		- 1	UNTY,				SPUD DATE	AFE			SUPERVIS		t-
			IT OPERATION		117-2			TAL DEPTH	ig# iu	PROG	RESS	vier	, UT	LING TII IE	+	07/02/04 ROP	FOR	MATION	i		TH. DEPTH	
4	4	<u> </u>		Trip	)			6,28	30	<u></u>	160		1	4.50	<u> </u>	11.0		Sa	nd		6,6	50
wr		VIS.	WL	-	ск	PH	SAN	ın I s	OLIDS %	MI Pv	JD DA	YP	GELS	DEF TH	I na	TE/TIME	CHLOR	OE e		ALCIUM	МВТ	041 T D014
9.5+		38	4.0			7.0	0.5		1.5	9	_	14	6/8	6278	<del></del>	4 7:00pm	124,0		-	2000	MBI	SALT PPM
										В	IT DA											
BIT SIZ	ZE ^	MFG.	TYPE	CODE	SERIAI,	NO.		JETS (1/32nd or TFA	<b>3</b> 7)	IN	1	TUC	FOOTAGE	HOL RS		ROP	MTF	RT+N		WOB	T B	CONDITION
7R 6-1	/4" SI	DBS S	EB709	617Y	10556	908	13	13	13	566	55 5	786	14	1.00		14.0	Υ	50/1	30	20		
11 6-1	$\overline{}$	-	EB709	617Y	10553		13	13	13	578	$\overline{}$	280	494	49.00	<b>—</b> —	10.1	<u> Y</u>	50/1	30	20		
12 6-1	/4   51	DBS S	SEB709	617Y	10556	911	13	13	13	628	30	-			+			╁	-		╁	<del>                                     </del>
		L			1			HYDRA	ULICS									<del> </del>		SLOW	DIIMD	<u> </u>
PUMP	MANUF	ACTURER	LINER	STROKE	GAL / STK	SPM	_			V DC	PUMP	1	R DIFF		HHP 'IN²		ECD		1	28 spm	FUMP	Ι
NO 1	W/ile	on 600	5"	LENGTH 14	3.8	64	+-	243		$\dashv$	1450	-	RESS.					1	2		40spm	-
2		on 600	5"	14	3.0	04	╁	43	$\dashv$		1450	$\vdash$	65		<del></del>			595 595	$\overline{}$	350	600	<u> </u>
Both										_								1 33.	, <del>,</del>		1 000	<u> </u>
			DRILL S	rring									GEOL	OGIC	=			<del>" "</del>	_	ENER	AL INFO	<del></del>
воттом 6-1/4 Віт	HOLE AS	SEMBLY	LENGTH	00	o.b. 6,250	1.0	).	FORM	ATION		MD	F	TV	D		LITHOLOG	′			RIGI		
		r)(.56 rp			4.750	l		<del> </del>		┼─		├			+			Rig		Steve		979-464 200 000
dbl pin x			1.	_	4.125							<del>                                     </del>			<del> </del>			_		P Test	(910)	7/20
monel D	C		28.	82	4.750			воттом	S UP TIME	BG	GAS		GAS D CONN	GAS		TRIP GAS				P Test		8/20
MWD P			5.0	_	4.750	ļ		3	0	1_:	20	L	SHOV	vs				Last	Safe	ety Mee	ting	8/14
Float su 20 its - s		IWDP	615.		4.750 4.750		2.125	·	UNITS	FF	ROM	H	To		Ŧ==	ROP (FT/HR	)	1		P Drill		8/14
Griffith D	•		29.9		5.750	-	2.120	<b> </b>		<del>                                     </del>		ļ			┼					rate Pip rate Bli		
3 jts - sp			185.	51	6.750		2.125					<u> </u>			<del></del>			1		rate An		8/4
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			· · · · · ·					l		$\vdash$		<del>                                     </del>			<del> </del>						.,	<u> </u>
															<del> </del>				-			<del>                                     </del>
Total B		N 14 1407	889.																			
80	+	22	140	_	sowr.	ROT. TO	RQUE	GRD. ELE			окв 12		KB ELEV		IN	7" @ 543			ST CA			@ 6650
			L					<u> </u>			RVEY	S	0,0			7 (@ 545		<u>'</u>	<u>w</u> -	435	4-1/2	യ രോഗ
MD	INCL.	AZIMUTH		ECTION	N+ / S-	E+/W-		LS TO	_		INCL.		MUTH		TV()		SECTION	N+/:	S-	É+/W-	DLS	TOOL
6,132 6,163	5.70 6.10	338.00 334.30						90 mv			6.20	_	9.10		6171				$\dashv$		1.77	mwd
0,103	0.10	1334.30	0140				1.	78   mv		DAILY	5.80		2.60		6203			<u> </u>			2.46	mwd
FROM	ŤÔ	HRS	LAST 2	HOURS:						DAIL	ACI	1411										
6:00	8:30	14.50			20 <b>-</b> 6280	(160	ft in 1	4.5 hrs	= 11fp	hr)												
9:30 9:30	9:30 10:30	1.00	TOH		& level	derrick								<del></del>								
10:30	1:30	3.00	TOH		u icvei i	u <del>c</del> i iiUK															w	
1:30	4:30	3.00			g bit, PU	new n	ntr, P	U new l	MWD											· · · · · · · · · · · · · · · · · · ·		
4:30	6:00	1.50	TIH																			
		-																				
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		_	Note	. \A/D	F Driller	Q. B.A1A.	) a=4	in co					·									
				540 g		CX IVIVVI	J act	IVE														
						gel, 7	) cal	c salt, 0	anco l	oar, 0	anco	drill.	, 20 sta	arch, 1 x	cide. 2	anco pac	, 1 drill	deter	ent	0 salt	7 floza	an, 0 de
Daily To	tal	24.00	3-1/2	" DP -	total jts	on loc	n = 1	90								1			,			,

		E	ngineer	ring &	Supervi	sion		F	XAC		Eng	ine	eri	na i	nc		<del></del>		040: -		1400		
Operate	or:		ine G&O				D								ORT				918) 5			004	
DATE		WELL				CONT	RACTOR							STATE	<u> </u>	s	PUD DATE	A			41-30 SUPERVIS		
08/16	5/04		Olverine NT OPERATION		al 17-2	Ь		CDDT	Rig#	10	PROGR		evier	, UT	LLING TILE	0	7/02/04 ROP		RMATION			teve H	
45	5	<u> </u>		Drill	ing				5,588			308			19.00		16.2	FOF	MATION Sai	nd	AU	тн. DEPTI 6.6	550
WT	<del>-</del> -	VIS.	WL		ск			_				D DA											
9.6		37	4.0			РН 7.0	0.5	_	SOLID 2.0		10	$\overline{}$	13	GELS 5/7	64 )6		7:00pm	121,			ALCIUM 0000	мвт	SALT PPM
												DA				1 0/10/04	7.00pm	121,	000	4	0000	<u> </u>	
BIT SIZE NO	E M	FG.	TYPE	CODE	SERIAL	NO.		JETS (1			in	T°	ÚΤ	FOOTAGE	HOL RS		ROP	МТ	R RP		WOB	DULL O	CONDITION
7R 6-1/			SEB709	617Y	+		13	1	3	13	5665	57	786	14	1.(0		14.0	Y	50/1	-	20	+ + +	G
11 6-1/- 12 6-1/-			SEB709 SEB709	617Y 617Y	1		13 13	1:		13 13	5786 6280	+	280	494 308	49.00	<del> </del>	10.1	<u> </u>	50/1	<del>-</del> †-	20		<b>_</b>
					1,000	-		<u> </u>	<u> </u>	13	0200	+-	$\dashv$	308	19. 0	$\vdash$	16.2	-	25/1	25	8-10	$\vdash \vdash$	╁
								HYD	RAULI	cs									<del></del>		SLOW	PUMP	
PUMP NO.	MANUFA	CTURER	LINER	STROKE LENGTH		SPI	v   (	ЭРМ	AV DP	AV		PUMP RESS.		R DIFF RESS.		HHP / IN <sup>2</sup>		ECD		_	28 spm		
1	Wilso		5"	14	3.8	60	) 2	228				420		200					595	_	350	40ѕрп	
2 Both	Wilso	n 600	5"	14	+	<del> </del> —	+			-		_	<u> </u>						595	0,		600	
			DRILL S	TRING	;	<u> </u>				<u>—</u>			L	GEOL	ogic				<u> </u>		Eller.	1 111	
воттомн 5-1/4 Bit	OLE ASS	EMBLY	LENGTI		O.D.		.D.	F	ORMATIO	N	MD			TV			LITHOLOGY	γ		- G	ENER/		
Motor (1.	0 degr	)(.56 rp		.00	6.250 4.750			<del> </del>		-			<u> </u>						Rig N				79-4644
dbl pin xo	)	··	<u> </u>	.88	4.125											<del> </del>					Steve Test	(918) 6	7/20
nonel DC				.82	4.750			ВОТТ	OMS UP 1	IME	BG G/	AS	Ξ	GAS DA	GAS		TRIP GAS		1		Test		8/20
MWD Pul Float sub				.64 .00	4.750 4.750		_		35 AS UNITS		35		_	0 show	/S	<u>L</u>	500				ty Meet	ing	8/15
20 jts - sp	iral HV	NDP	615		4.750		2.125		AS UNITS		FRO			TC			ROP (FT/HR	2)	Last		Drill rate Pip	e Rame	8/14 8/14
Griffith Dr			29.	_	5.750																ate Blir		
its - spir	rai HW	DP	185.	.51	6.750		2.125	<u> </u>		$\dashv$									Last	Oper	ate Anr	nular	8/4
										$\dashv$									<b>-</b>				
				4_								耳											
·				+				ļ		$\dashv$													
									,			_							<b> </b>				
Total BH		A WT.	889. PUWT.	51	SO WT	ROT. T	OBOUE	CPP	ELEVATIO		4. 72.										-		
80		22	140		65	KOT. I	OKOUE		5,835	N	GL TO 1	KB		KB ELEVA 5,84			" @ 5435			T CAS ② 54	_		@ 6650
										_	SUR	VEYS	3							<u>u</u> 0	100	4-1/2	@ 0000
		AZIMUTH 315.00		53.65	N+ / S-	E+/W	- Dt	$\neg \neg$	mwd	6,44		30		1UTH 3.70		TVD 6424		SECTION	N+ / S-	ļ	E+ / W-	DLS	TOOL
5,386 4	.90 2	299.70	6362	60.72			1.3	_		6,5		_	_	2.50		6487		-64.69 -68.14		+		1.22	mwd mwd
FROM	to	HRS	LAST 2	4 HOURS						D	AILY A	CTIV	VITY										
	_	2.00	TIH	THOONS															_				
		3.00			ut rotating		rubb	er, wa	ash to	btm	1												
1:00 6	:00	19.00	Drilli	ng tro	m 6280 -	6588																	
												<u> </u>											
	4																			_			
	+													·									
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		<del> </del>			F Driller 8	<u>MW</u>	D acti	ve															
	$\dashv$	$\dashv$		450 g	: 0 anco	gel. O	calc s	alt. 0	anco	bar	. 0 and	n dri	ill O	starch	0 voido	0.0000	nao O	deill der	oraa-*	0 :	alt 0.0		24-6
aily Total	1 2	24.00	3-1/2	" DP -	total jts	on loc	n = 19	90	4,100	Jai	, o and	,o uii	, U	sarul	i, o xcide	, o anco	pac, 0	unn det	ergent.	υs	aπ, U fl	ozan,	u detoan

			Enginee	ring &	Supervi	sion						ring, l			(9	18) 599	9400		
Opera DATE	ator:		erine G&O	Co of U	tah, LLC	,		ILY [	DR	<u>ILLI</u>		REP	ORT		AF	PI# 43-	041-30	031	
	17/04		Wolverine		l 17-2	CONTRA	CDI	DT Rig#	10			ity, STATE vier, UT		SPUD DATE 07/02/04	AFE		SUPERVI	sor Steve H	lash
	46	PRE	SENT OPERAT	ions Tri	ρ		TOTAL	DEPTH 6,750		PROGRE	ess 162		LLING TIME 14.50	11.2	FOR	MATION Sand	AL	TH. DEPTH	
											DAT	A						0,0	
9.7		38	4.		1/32	7.0	0.50	3.0		12	16		67 JO	8/16/04 7:00pm	125,0		CALCIUM	МВТ	SALT PPI
								1	_		DAT		0750	T 0/ 10/04 7:00pm	1 120,0	00	41000	<u> </u>	
BIT S	SIZE	MFG	TYPE	IADC CODE	SERIAL	NO.		S (1/32nd*) or TFA		IN	ÖÜ	FOOTAG	HOL RS	ROP	MTR	RPM RT+MTR	WOB	T B	CONDITIO
_		SDBS	SEB709	617Y	10556		13	13	13	5665	578	6 14	1.00	14.0	Y	50/130	20		
$\rightarrow$		SDBS	SEB709 SEB709	617Y	10553		13		13 13	5786 6280	_		49.30	10.1	Y	50/130	-		1
			020700	10177	10000	311	13	13	13	0200	16/5	0 470	33.50	14.0	-   Y	25/125	8-10	++	+
	, .		· · · · · · · · · · · · · · · · · · ·				Н	/DRAUL	ICS							<del>T</del>	SLOW	PUMP	<u> </u>
PUMP NO	MANI	JFACTURE	R LINER	STROKE	GAL / STK	SPM	GPM	AV DP	AV	- 1	UMP RESS.	MTR DIFF PRESS		HHP 'IN2	ECD	1 2	28 spm	40spm	,—
1		son 60		14	3.8	60	228			1	420	200				5950'	350	403piii	+
2 Both	Wii	son 60	0 5"	14	<u> </u>	<u> </u>	-		-		_			<del></del>		5950'		600	Ĺ.,
Dom			DRILL	STRING	<u> </u>	<u> </u>			<u></u>	<u> </u>		GEOL			<u>L.,</u>	<u> </u>	AFUES		
		ASSEMBLY			O.D.	1.0		FORMATIC	N	MD			VD	LITHOLOG	BY Y	L	GENER RIG		0
6-1/4 E		gr)(.56		1.00 8.47	6.250 4.750						-					Rig No:		(435) 9	
ibl pin		.gi )(.50		1.88	4.730		_				-					Cell No Last BC	Steve	(918) 6	7/20
nonel	DC		2	8.82	4.750		В	OTTOMS UP	TIME	BG G/	AS I	GAS C		TRIP GAS	<u> </u>	Next B			8/20
IVD F				5.64	4.750			35		35		SHOW		500		Last Sa	fety Mee	ting	8/16
		HWDP		3.00 5.22	4.750 4.750	<del></del>	2.125	GAS UNITS	S	FRO	М		•	ROP (FT/H	R)	Last BC		o Pom	8/14
Griffith	Drlg ja	ars	2	9.97	5.750												erate Pi erate Bli		
jts - s	piral F	IWDP	18	5.51	6.750		2.125		_							Last Op	erate An	nular	8/4
	•		_	-	···	ļ					$\dashv$								ļ
																			╁─
				-					_		4								
							-		$\dashv$		+			<del> </del>					<b>├</b>
Total I			889																
STRING V	w1	вна wт. 22	140		50 WT.	ROT. TO	RQUE	5,835	ON	GL TO 1		KB ELE\ 5,8		intermediate 7" @ 543		LAST C			CASING
											VEYS		<u> </u>	1 (2) 040		7" @	0400	4-1/2"	@ 0/5
мD 3,576	4.70	AZIMU 288.		SECTION	N+ / S-	E+/W-	DLS	TOOL	Mi			AZIMUTH		TVE	SECTION	N+ / S-	E+/W-	DLS	TOOL
3,672	5.40	<del></del>					0.94	mwd	6,7	10 5.	70	280.40		6684				0.87	mwd
										AILY A	CTIV	ITY							I IIIWO
FROM 6:00	9:00	3.00		24 HOURS	m 6588 -	6623													
9:00	11:30				air, chg s		1 & #2								·				
11:30	11:00	_	0 Dri	lling fro	m 6623 -	6750.	TD@	6750' @	11:	00 pm	8/16	/04							
1:00	1:00				les, pum			еер				<del></del> -				-			
2:00	2:30				20 stands am 6712										<del></del> -				
2:30	3:30	1.00	) Cir	culate															
3:30	6:00	2.50	ТО	OH to I	aydown 1	ools													
		1	+																
- 1		<del> </del>	<del> </del> -																
		+-	+																
			Not	e: WR	F Driller	& MWE	releas	ed											
			Fue	d: 450	gals									e, 0 anco pac, (	· · · · · · · · · · · · · · · · · · ·				

			Engir	neeri	ng & S	Supervis	ion							ng, l				(9	18) 599-	9400		
Opera	tor:			80 C	o of Uta	ah, LLC			<u> AILÌ</u>	DR	RILL	LING	G F	REP	OR'I			ΑP	l# 43-(	041-30	0031	
08/1	18/04				ederal	l 17-2	CONTR	С	DDT F		PRO	- t -	evie	r, UT	LING TINE	07/02/0		AFE	ATION		SOR Steve H JTH. DEPT	
	17			-	Loggi	ng			6,7					J		#DIV/0	!	. 014	Sand			 650
												IUD D										
9.7		vis. 38	+	4.0	+-	ск 1/32	7.0	0.50		3.0	$\overline{}$	2	16	8/12	67:50	8/17/04 5:00pr		26,00		42000	мвт	SALT PPM
0.,				7.0		1102	, .0	0.0	<u></u>	0.0		ZIT DA		0/12	07.70	Т 0/1//04 3:00рг	··	20,0		42000		
BIT S	IZE	MFG.	TYP	E	IADC	SERIAL	NO.	J	ETS (1/32r or TFA	ď)			OUT	FOOTAGE	HOL RS	ROP		MTR	RPM RT+MTR	WOB		CONDITION
$\neg$	1/4"	SDBS	SEB	709	617Y	10556	908	13	13	13	56	65 5	786	14	1.(0	14.0		Y	50/130	20	171	3 G
11 6-	1/4"	SDBS	SEB	709	617Y	10553	274	13	13	13	57	86 6	280	494	49.00	10.1		Υ	50/130	20		
12 6-	1/4"	SDBS	SEB	709	617Y	10556	911	13	13	13	62	280 6	750	470	33.50	14.0		Υ	25/125	8-10		
			:			L					<u></u>									<u> </u>		
PUMP	MAN	UFACTURE	R LI	INER	STROKE	GAL / STK	SPM		HYDRA PM A		AV DC	PUMP	М	TR DIFF		HHP. IN2	E	CD	1		V PUMP	7
NO	<u> </u>		_		LENGTH		<u> </u>	_	_			PRESS	<u> </u>	PRESS.					2		40spr	n
2	<del> </del>	lson 60 Ison 60		5" 5"	14	3.8	60	2	28	+		1420	+	200			+		5950'	350		-
∠ Both	1 441	ISUN DU	+	-	14			+	$\dashv$	-			+				+		5950'	I	600	
	-		DR	ILL S	TRING	<u>'                                    </u>							<u> </u>	GEOL	ogic —					GENER	AL INF	0
		ASSEMBL	4	LENGTH		O.D.	<u>'</u>	D.	FOR	MATION	Τ_	MD	1-	T\	/D	LITHOLO	OGY				INFO	
-1/4 B	sit		+	1.	00	6.250			<del> </del>		+		+			<del> </del>			Rig No:			979-464
it sub	- floa	t	+	1.	98	4.625			<b> </b>		+-		+							DP Test	(9.19)	629-980 7/20
									BOTTON	IS UP TIM	E   E	G GAS		GAS D	I GAS	TRIP	AS			OP Test		8/20
					$\bot$					35		35		SHOV		500	2		Last Sa	fety Me	eting	8/17
			+		_				GAS	UNITS	<b>T</b>	FROM	<del>  -</del>	Ti		ROP (FT	/HR)		Last BO			8/14
Ojts - Griffith		HWDF	<u> </u>	615. 29.	_	4.750 5.750		2.125			+		╁╌			<del>                                     </del>				perate P	·	
		HWDP	+-	185.	_	6.750		2.125			+-		╁						<del></del>	perate B perate A		n 8/17 8/4
						*							1.									1
											+		-			<u> </u>				<u>_</u>		ļ
		<del></del>	+-								+		+									+
			$\top$		+-						$\top$		$\dagger$						<b> </b>			+
Total				833.	68								I									
STRING 80	WT .	BHA WY	+	PU WT	$\dashv$	so wr.	ROT. T	ORQUE		EVATION 835	GI	12	Ŧ	KB ELE\ 5,8		7" @ 5				5435	+ -	T CASING " @ 6750
				140						000	<u> </u>	URVE	VS.	5,0		/ @3	430		, (4)	3433	4-1/2	@ 0/50
MD	INCL	_			SECTION	N+/S-	E+ / W	. р	LS T	00L	MD	INCL		ZIMUTH		CIVT	SECT	TION	N+/\$-	E+/W-	DLS	TOOL
5,576	4.7	_		551			ļ		$\rightarrow$	$\neg$	,710	5.70	2	80.40	——	6684				-	0.87	
5,672	5.4	0 281.	oul p	647		<u> </u>		_ U.	96   m	wd	DATE	YAC	 	<u> </u>	=				<u> </u>	L	<u> </u>	mwd
FROM	то				4 HOURS						2711	AU		•								
6:00	9:0					lown dire	ctiona	l tools														
9:00 10:00	10:0 2:3				vice rig	g ,HWDP 8	l jare :	only -	eam 0	) ft to	htm 6	9) A7E	<u>n'</u>						<del></del>			
2:30	4:3					& pump 3					<u> </u>	<i>y</i> 013	J									
4:30	9:0	_				in out op																
9:00	10:3	30 1.5	0	RU	Hallibu	urton Wir	eline 1	o log														
10:30	1:0															, tool failure, la		*****				
1:00	6:0	0 5.0	0	Log	- run i	#2 Dual l	_atero	iog, D	ensity,	Neutro	on, M	ııcrolo	g co	mbo (1	23') - Lo	g TD 6227', pu	iii to 7'	csg	@ 542	u' (logg	er), PC	OH, lay
		+	+	Note	e: Run	#2 pulle	d tiah	on bt	m; Ne:	kt run -	- EMI	/Dipm	eter:	LAS fi	les being	transmitted for	or GR	R at	report ti	me		
																no backup av					e now	checkin
			$\perp$	nea	rest av	vailable t	ackup	and f	ime re	quired	to m	obilize	& d	eliver								
	_	+	+			······································																
		+	+	Not	o. \//	DE Della-	g. RALA	/D rol	2222													
	-	$\dashv$	+		e: vvr l: xxx :	RF Driller gals	Ct IVIV	יט ופונ	sase0						—-							
		$\top$	$\top$			*	ar fibe	r, 1 nu	itshell.	0 anco	bar.	0 and	o dr	ill, 0 sta	arch, 3 x	cide. 0 anco pa	ac, 0 d	drill d	etergen	t, 0 salt	, 3 floz	an, 0 de
			00						<u>'</u>											-		

		E	ngineer	ing &	Supervis	ion	•	EXA	СТ	En	gine	eri	ing, l	nc.				(9 <sup>-</sup>	18) 59	9400			
Operate	or:	Wolver	rine G&O	Co of U	tah, LLC		DA	ILY											<u> </u>	-041-3	300	31	
DATE 08/19	2/04	WELL	/olverine	Endora	117.2	CONTRAC		DT Rigi	#10		- 1		, STATE er, UT			SPUD DATE 07/02/04		AFE		SUPER			ah
			NT OPERATIO	ONS				LDEPTH	+10	PRO	GRESS	evie		LING TIP IE		ROP		FÖRM	ATION			DEPTH	
48	5			Logg	ing		<u> </u>	6,750		L M	UD D	ATA			<u> </u>	#DIV/0!		<u> </u>	Sano			6,6	50
wr 9.7	-	vis 38	4.0	-		PH 7.0	SAND 0.50		iDS %	+	2	YP 16	GELS	67.50	-	TE/TIME		HLORID	$\overline{}$	CALCIU	_	мвт з	SALT PPM
9.7		30	4.0		1/32   /	.0 ]	0.50			-	SIT DA		8/12	67.30	8/17/0	04 5:00pm		26,00	JU	42000	1		
BIT SIZ	Œ	MFG.	TYPE	IADC CODE	SERIAL N	IÓ.	JĖ.	TS (1/32nd") or TFA		1	N	OUT	FOOTAGE	HOL RS		ROP		MTR	RPM RT+MT	, wo	8	DULL C	ONDITION
7R 6-1			SEB709 SEB709	617Y	105569		13 13	13	13	-	-	786 3280	14 494	1.00	<del> </del>	14.0	·	Y	50/13 50/13	_	$\rightarrow$	_	
12 6-1		<del></del>	SEB709	617Y 617Y	105569		13	13 13	13 13	_		3750	470	49.00 33.50		10.1		Y	25/12	+-			<u> </u>
				<u> </u>	<u> </u>						-				<u></u>					<u> </u>		Ш	<u></u>
PUMP	MANU	FACTURER	LINER	STROKE	GAL/STK	SPM	GPN	YDRAU		V DC	PUMP		ITR DIFF		HHP 'IN²		E	CD		1 28 s		PUMP	
NO 1	Wils	son 600	5"	LENGTH	3.8	60	22	8		<del>-</del>	PRESS 1420		PRESS.						5950		0	40spm	
2	Wils	son 600	5"	14															5950			600	<u> </u>
Both			DRILL S	יעופד:	1		<del></del>		L			į	GEOL	OGIC			<u> </u>		<u> </u>	CEU	- P -	L INFO	
		SSEMBLY	LENGT	н	O.D.	I.D.	_	FORMAT	ION	T	MD	1		/D	<b>T</b>	LITHOLOG	Υ				RIG IN	FO	
6-1/4 Bit	<u>t</u>		1	1.00	6.250			<del></del>		╁┈		+			<del> </del>				Rig N Cell N				)79-4644 329-9801
bit sub -	float		1	1.98	4.625					<u>L</u>			GAS D	DATA					Last E	OP Te	st	. , , -	7/20
		<u> </u>	<del> </del>					воттомя с			G GAS	+	CONN	GAS	$\top$	TRIP GAS	5			BOP Te		na	8/20
								GAS UN		Ξ	FROM	÷	SHO	WS O	==	ROP (FT/H	R)			OP Dri			8/14
20 jts - s Griffith D	•		615	5.22 9.97	4.750 5.750	2	.125			<del> </del>		╬			<del> </del>				_	perate perate	_		
6 jts - sp			185	-	6.750	2	.125													perate			8/4
			-	-			╬			╁	<del></del>	+-			+								
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							-			╁		╫			┼								}
												Ţ											
Total B		BHA WT.	833 PUW		SO WT.	ROT. TOP	QUE	GRD. ELEV	ATION	G	L TO KB	$\perp$	K8 ELE	VATION	-	NTERMEDIATE	CSG		LAS	T CASING		NEXT	CASING
80		22	140		65			5,83	5	<u> </u>	12	<u></u>	5,8	347	<u> </u>	7" @ 543	35		7" (	@ 5435		4-1/2"	@ 6750
MD	INCL.	AZIMUT	'H TVD	SECTION	N+/S-	E+/W-	DLS	TOOL		S MD	URVE INCL.		AZIMUTH		TVD	-	SEC	TION	N+/S-	E+/\	N- ]	DLS	TOOL
6,576 6,672	4.70 5.40	- 1	0 6551 0 6647				0.9		$\neg$	710	5.70	1	280.40		6634					+	$\dashv$	0.87	mwd
0,012	5.40						_ J.8	→ I HIMA		DAII	YAC	TIVI	TY	<del></del>			_						mwd
6:00	то 11:00	HRS 0 5.00		24 HOUR 01 - I'UN	s: #3 EMI/C	ip - one	e pad	not wor	kina	- RD	)												
11:00	2:00	3.00	Lo	g - run	#4 EMI/C	ip - log	6714	' - 5420															
2:00 3:00	3:00 4:00				#5 SFT - #6 CBL -					o big	- RD	- or	der redi	ress Lit b	oy hotsh	not							
4:00	12:30		Do	wn - w	aiting on	tools																	
12:30 1:30	1:30 3:00	_			#7 BCS -				- too	nois	v - RF					<del></del>							
3:00	6:00				#9 FWS						, ,,,,,,												
			-																				
		1																					
			No	te· @	6am - wai	ting or	redro	ee kit fa	r SE	T 8. 4	Juan	Lloc	from C	asner M					·				
					oarri - war operations											, run CBI	., se	t 7" \	NLS R	ВР	_		
			1																				
	otal	24.0	۰۱																				

			Er	ngineer	ring &	Supervi	sion		EXAC	TE	ngir	neer	ing, l	 пс.		-ms		918)	599-	9400	•	
Ope	rator:	: V	Volveri	ne G&O	Co of U	ah, LLC			ILY [											41-30	031	
DATE	8/20/0		WELL Wr	olverine	Federa	l 17-2	CONTRAC		DT Rig#	10		١.	Y, STATE Or, UT		T	SPUD DATE		Ē		SUPERVIS		11-
		,		T OPERATION	ONS		1		DEPTH		PROGRES			LING TINE	<del>                                     </del>	07/02/04 ROP		RMATION	1		teve H	
	49				Logg	ing		<u> </u>	6,750		MUD	DATA			<u> </u>	#DIV/0!		Sa	and		6,6	550
	WT	1	VIS.	WL		СК	РН	SAND	SOLID	8%	PV	YP	GELS	DEPTH	D/	TE/TIME	CHLOR	RIDES	1 (	CALCIUM	мвт	SALT PPM
	9.7	<u> </u>	38	4.0		1/32	7.0	0.50	3.0	<u> </u>	12	16	8/12	67:50	8/17/	04 5:00pm	126,	000	<u></u>	42000		
BIT	SIZE	MF	G.	TYPE	IADC	SERIAL	NO.		S (1/32nd*)	Т	IN	OATA OUT	FOOTAGE	HOL RS	Т	ROP	MT	R F	PM	WOB	DULL	CONDITION
νο. 7R	6-1/4"	SDI	BS S	EB709	617Y	10556	908	13	or TFA	13	5665	5786	14	1.(0	┼	14.0	<del>-  -</del>	-	MTR /130	20	T E	G
11	6-1/4"	SDI	BS S	EB709	617Y	10553	274	13		-	5786	6280		49.00		10.1	Y	+	/130	20		<del> </del>
12	6-1/4"	SDI	BS S	EB709	617Y	10556	911	13	13	13	6280	6750	470	33.50	<del> </del>	14.0	Y	25	/125	8-10		ļ
					1			н	/DRAUL	CS					<u> </u>			<u> </u>		SLOW	DUMP	
PUM		ANUFAC	CTURER	LINER	STROKE	T .	SPM	GPM	_	AV D			MTR DIFF		HHP: IN <sup>2</sup>		ECD	+	1	28 spm		I
NO.		Vilsor	1 600	5"	LENGTH	3.8		0	+	┢	PRE	SS.	PRESS.				<u> </u>	-	2 50'	350	40spn	1
2	v	Vilsor	600	5"	14													┪	50'	330	600	+
Bot	h			L	i	<u> </u>		<u></u>	<u></u>		Ц											
ВОТ	TOMHOL	LE ASSE		DRILL S		O.D.	1.0.		FORMATIC	N	MD	_	GEOL			LITHOLOG	3Y			GENER/		0
6-1/4	Bit			<del> </del>	.00	6.250						$\perp$						Rig	No:	-AIO1		979-464
hit sı	ıb - flo	nat		<u> </u>	1.98	4.625		-							<b>├</b>					Steve	(918)	T
511 00					1.50	4.020		В	IOTTOMS UP	TIME	BG GAS	<u>-                                    </u>	GAS D	ATA GAS	<u> </u>	TRIP GA	s			P Test P Test		7/20 8/20
					_				35				SHOV	Ng				$\neg$		ety Mee	ting	8/17
20 its	- spir	ral HV	VDP	615	22	4.750	2	125	GAS UNIT		FROM	===	T		F	ROP (FT/I-	IR)			P Drill		8/14
	th Drlg				97	5.750		120		_		+			<del>                                     </del>			_		erate Pip erate Bli		1
6 jts	spira	I HWI	DP	185	5.51	6.750	2.	125										Las	t Ope	erate An	nular	8/4
				ļ						-					<del>                                     </del>			╀				-
								-		_		+		<del></del>				╢				<del> </del>
					$\perp$																	
					+				,			+-			<del> </del>			╂—				<del> </del>
	al BHA	••		833		7.				$\dashv$		+					***	╫				<del> </del>
	IG WT.	<del> </del>	22	140	-	50 WT.	ROT. TOR	QUE	5,835	ON	GL TO K	В	KB ELEV			TERMEDIAT		╢—	AST C			CASING
		<u> </u>		1,10					0,000		SURV	EYS	3,0			7 (U 54	35		<u>w</u> :	5435	4-1/2	@ 6750
MD C. E.Z.	-		AZIMUTH	TVD	SECTION	N+ / S-	E+/W-	DLS	TOOL	MD	INC	L /	VZIMUTH		TVE		SECTION	N+	/ S-	E+ / W-	DLS	TOOL
6,57 6,67			288.70 281.80					0.94	<del></del>	6,71	0 5.7	0 2	280.40		6684		<u> </u>	+			0.87	mwd
										D/	AILY A	CTIVI	ΤΥ									, mwu
6:00		30	HRS 1.50		24 HOURS	#9 FWS	comple	te FV	/S as alt	ernati	ve to f	Dinole	Sonic									
7:30	_		3.50			#10 CBL				*			·									
11:00	$\overline{}$		2.00			#11 SFT																
1:00 4:30		_	3.50 9.50	Log	ı - run i	#12 5F [								rking, go % succes			for read	setti	nas.	lost ma	in com	nuter
2:00		_	4.00	Wa	it on W	RF RBP	,				/		, .00			55413		55111	,	.oot ma	0011	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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-		En	gineeri	ing & S	Supervis	sion		EXA	CT	Engi	nee	ering	, Inc.		**********		(91	8) 599-	9400		-
Opera	tor:	Wolveri	ne G&O (	o of Ut	ah, LLC		D/						POR	Γ				# 43-0		031	
DATE 08/2	21/04		lverine f		l 17-2	CONTR	CI	DDT Rig	#10		Se	NTY, STATE Vier, U	<u> </u>		SPUD DATE 07/02/04	Ā	VFΕ		SUPERVI	sor Steve Ha	ash
	50	PRESEN	T OPERATIO	ns Trip	)		тот	AL DEPTH 6,750	)	PROGRE	SS		DRILLING TIF	E	ROP #DIV/0!	F	ORM	Sand	AL	лн рертн 6,6	
wr		VIS.	l WL		ск	PH	SAND	) so	LIDS %	MUE	DA'		S DEF1	тн Т	DATE/TIME	Сн	ORIDE	s I	CALCIUM	мвт	SALT PPM
9.7		38	4.0		1/32	7.0	0.50		3.0	12	1	6 8/1			8/17/04 5:00pm		6,00		42000		GAZ, 1114
BIT SI	ZE N	FG.	TYPE	IADC	SERIAL	NO.	J	ETS (1/32nd*) or TFA	)	BIT	DAT		AGE HOLF	RS	ROP	- 1	MTR	RPM RT+MTR	WOB	DULL C	CONDITION
			EB709	617Y	10556		13	13	13	5665	+		<del></del> -		14.0		Υ	50/130	20		
			EB709 EB709	617Y 617Y	10553		13 13	13	13	5786 6280	+				10.1		Y	50/130 25/125	20 8-10	++	
					<u> </u>																
PUMP	MANUF	ACTURER	LINER	STROKE	GAL / STK	SPM	GF	HYDRAU			UMP	MTR DIF	F	ŀ	HHP 'IN <sup>2</sup>	ECC	,	1	SLOW 28 spm	/ PUMP	
1	Wilso	n 600	5"	LENGTH 14	3.8	-	+	5	+	PF	RESS	PRESS						5950'	350	40spm	
2	Wilso	n 600	5"	14					_ _					-1				5950'		600	
Both			DRILL S	TRING	1		<u> </u>		-			GE	LOGIC .						CENED	AL INFO	
	MHOLE AS		LENGTI		O.D.	1.1	D.	FORMA	TION	MC	)	GE	TVD	_	LITHOLOG	Ý	╛			INFO	
6-1/4 B	it		1	.00	6.250					<del> </del>							$\dashv$	Rig No:		(435) 9 (918) 6	979-464
bit sub	- float		1	.98	4.625													Last BC		(918)	7/20
				-		-		воттомя 35		BG G	AS ]		AS DATA ONN GAS		TRIP GAS		#	Next Bo		ntin n	8/20
								GAS U		FRO	M I		HOWS TO		ROP (FT/HF	₹)	$\exists$	Last Sa Last BC		ang	8/17 8/14
	spiral H Drig jar		615 29		4.750	<u></u>	2.125			ļ	$\dashv$						_		***************************************	pe Ram	<del>                                     </del>
	piral HV		185		5.750 6.750		2.125			<u> </u>							-	Last Op		ind Ram nnular	8/17
																	$\blacksquare$				
													<del></del> -	1			$\dashv$				<del> </del>
										ļ				_							
				_							$\dashv$			+			┪				<u> </u>
Total E		IHA WT.	833 PUWT	68	SO WT.	ROT. TO	ORQUE	GRD. ELEV	/ATION	GL TO	кв	ка	ELEVATION		INTERMEDIATE	CSG		LAST C	ASING	I NEXT	CASING
80		22	140		65			5,83		12			5,847		7" @ 543			7" @		1	@ 6750
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+/W	DL	.s тоо	L		VEY:	S AZIMUTI			TVD	SECTIO	ис	N+ / S-	E+/W-	DLS	TOOL
6,576	4.70	288.70					0.9		$\neg$	710 5	.70	280.40		(	6684		$\dashv$			0.87	mwd
6,672	5.40	281.80	6647		l	<u> </u>	0.9	96   mw	d II	DAILY	ACTI	VITY	<u> </u>		<u></u>					<u> </u>	mwd
FROM S:00	TO 7:00	HRS		24 HOURS	RF RBP	,															
6:00 7:00	7:00 9:00	1.00 2.00					RBP o	n wirelir	ne @	2030', F	200	H, clos	e BR, P1	Γ to	1300 psi with r	ig, hel	ld O	K			
9:00	10:30	1.50	RD	Hallibu	urton Log	ging															
10:30 6:00	6:00 8:00	7.50 2.00			g head, 1 3m x 11					0.3000	nei									<del></del>	
8:00	12:00	4.00			stack, PT		<u>_</u>	•													
12:00	1:30	1.50			ating head			01 & lata	h DD	D & rate	2200										
1:30 3:00	3:00 5:30	1.50 2.50			etr head lown RBI		.U ZU3	o de lato	KB	r ox rele	5a50										
5:30	6:00	0.50		with B																	
					_	_															
								*********													
			note	e: Notif	fied Al M	ckee o	f BLM	of inten	it to n	un 4-1/2	2" cs;	g - reco	l verbal	ok							
			note	e: Notif	fied Al M	ckee o	f BLM	of inten	it to n	un 4-1/2	2" cs	g - reco	l verbal	ok .			-			± % = 4 = 44 = ± .	

		E	ngineer	ing & S	Supervis	ion		EX	ACT	Eng	inee	ering,	Inc.			(	918) :	599-	9400			
Operat	or:	Wolveri	ne G&O (	Co of Uta	ah, LLC		D	AIL	/ DF	RILL	NG	REP	OR <sup>-</sup>	Γ		Α	PI# 4	13-0	041-30	031		_
DATE		WELL				CONTRA						NTY, STATE			SPUD DATE	AF		-	SUPERVI	SOR		_
08/2	2/04		Olverine I		17-2	l		DDT F		PROGR		vier, UT	ILLING TIN	Ē	07/02/04 ROP	FO	RMATION			TH. DEP		_
5	1	<u> </u>		WO	<u> </u>			PBTD	6624'						#DIV/0!		Sa	and			,650	
147		186									D DAT											_
9.7		38	4.0		ск 1/32	рн 7.0	0.5		3.0	12	16		DEP 675	_	8/* 7/04 5:00pm	126		-	42000	мвт	SALT P	PM.
											DAT			=	1 4 1/10 1 0 10 0 0 11	.20,		_	12000			_
BIT SIZ	E M	IFG.	TYPE	IADC	SERIAL	<b>40</b> .		JETS (1/32) or TFA	nd")	IN	OU	T FOOTAG	HOU	१९	ROP	MT		PM MTR	WOB	_	L CONDIT	ION G
7R 6-1	/4" SE	DBS S	EB709	617Y	10556	806	13	13	13	566	5 578	B6 14	1.C	0	14.0	Y	_	130	20	$\dagger \dagger$	-	_
11 6-1	/4" SE	DBS S	EB709	617Y	10553	274	13	13	13	578	628	80 494	49.	0	10.1	Y	50/	130	20			
12 6-1	/4"   SE	DBS S	EB709	617Y	10556	911	13	13	13	628	675	50 470	33.	<u> </u>	14.0	\ <u>`</u>	25/	125	8-10	11	_	_
<u> </u>					<u> </u>	!	-	10/55		<u> </u>			<u> </u>		<u></u>		<u> </u>					_
PUMP	MANUF	ACTURER	LINER	STROKE	GAL/STK	SPM	1	HYDRA			PUMP	MTR DIFF	$\overline{}$		HHP / IN <sup>2</sup>	ECD	╁	ΤŦ	SLOW 28 spm		P	_
NO.				LENGTH		ļ					PRESS.	PRESS.	<b> </b>				<b>.</b>	2		40sp	m	_
1 2		on 600 on 600	5" 5"	14	3.8	<u> </u>	┿	0		-			$\vdash$				┰	50'	350	+	_	
Both	VVIISC	011 600	-	14	3.8	<del> </del>	╁	0					├	_			59	50'	<u> </u>	600	0	_
			DRILL S	TRING		<u> </u>						GEO	OGIC	=			<u> </u>	_	GENER	AI IN	ΕO	=
	HOLE AS		LENGT	н	O.D.	1.0	Ď.	FOR	MATION	N	D		VD		LITHOLOG	Υ	1			INFO		=
-1/4 Bi	<u> </u>		1 1	.00	6.250	<u> </u>		$\vdash$		-	$\dashv$			_			-   `	No:		•	979-4	
it sub -	float		1	.98	4.625	<b></b> -		<del>                                     </del>		+	_				<del> </del>				Steve	(918	<del></del>	20
	···oux				7.020			BOTTON	IS UP TIM	E   BG	GAS	GAS CON	DATA N GAS		TRIP GAS		$\neg$		OP Test		$\overline{}$	20
									35								_	-	fety Med	eting		17
								1	UNITS	FR	ОМ		ows TO	_	ROP (FT/H	₹)	Las	t BC	OP Drill		8/	14
0 jts - s	-		615	.22	4.750 5.750		2.125			-	$\dashv$						1		erate Pi	·		14
Griffith C its - sp			185	-	6.750		2.125				$\dashv$			_			1		erate Bi erate Ai		_	17 /4
. <del>, , ,</del>			100		0.,00			1		1							Las	ii Op	relate Al	IIIulai	┼	-
																						_
								<b> </b>		<b>-</b>					··		┦					_
				+				╟							<u> </u>		-				+	_
			<del></del>					1		<b>†</b>				_			┪—					_
Total B			833		1.0												1				+	_
STRING W	т. Е	22	PU WT	-	50 WT.	ROT. TO	ROUE	<b></b>	835	GL T	-		847	Н	INTERMEDIATE		┰		CASING	+	XT CASIN	_
			1 140					1 3	033		RVEYS		041	_	7" @ 543		1	<u>w</u>	5435	4-1/.	2" @ 6	/ 50
MD	INCL.	AZIMUTH	TVD	SECTION	N+/S-	E+ / W-	-	ols T	OOL		INCL.	AZIMUTH			TVL	SECTION	N+	/ S-	E+ / W-	DLS	тс	OL
3,576	4.70	288.70					$\overline{}$		<b>─</b>	,710	5.70	280.40			6684		-			0.8	7 m	wd
3,672	5.40	281.80	6647				0	.96   n	iwd	DAILY	A A TI	115-57	<u> </u>				<u> </u>	_	<u> </u>	<u> </u>	m	wd
FROM	то	HRS	LAST	24 HOURS	(					DAILT	ACII	VIII										_
6:00	8:30	2.50			it to 675	)'																
8:30	11:00	2.50			rip gas	I F	- DD	LIMIDD	0 41		l. 1		10.00			4/04						
11:00 8:00	8:00 3:00	7.00													@ 8:00pm 8/2 as casing incl 5		ite - 1	3.0	entraliza	ere		_
0.00	0.00	7.50													n tops @ 6186,							_
					1550', 5																	_
3:00	4:00	1.00										RU to ci	c, was	hed	d 1 jt in to 6670	, next ji	woul	d no	t go, se	et btm	csg @	<u>}</u> €
4:00	6:00	2.00			r. FS@								DIA/ C	0 bl	hl Cupar Eluah	10 D\A	25 6	.b. /	0500 5	0.50.5	107.4	
4:00	6:00	2.00						<del>-</del> -							bl Super Flush, 500 psi over, fl							_
					ted casir												🗸	300			<u>•                                      </u>	_
				_									nplete	@ 6	6:15am 8/22/04	. WOO	;					_
																						_
			B1	o. D	d. 104!	noi	0051				d	olol-s -	. 41m		ha inalizate di 199		lakte :	<u> </u>	-4-			_
$\dashv$		<del> </del>			6,289 C									VIII E	be included with	Comp	econ	COS	518			
- t		<del>                                     </del>	Jas	wo	J,200 C	5111511	. ψ 1 <del>1</del>	, , , , , ,	JLD (	ψ 1 1, & U	, Joy	CICW P									-	_
		1	l																			

08/23/04 52 wr	WELL WO PRESENT VIS. 38	Verine F	ederal		CONTR		AIL	<mark>/ D</mark>	RIL	LIN	<u> </u>	)ED/	JD.L			A D.	# 40 0	44 20	031	
08/23/04 52 wt 9.7 SIZE MF0 VR 6-1/4" SDE 11 6-1/4" SDE	WO PRESENT VIS. 38			17.0	CONTR						9 1	KET	JKI		- 4	API	# 43-0	41-30	051	
52 wt 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 9.7 817 817 817 817 817 817 817 81	VIS.			1/-/			DDT F	Ria#1	0			STATE r, UT		SPUD DATE 07/02/04	ľ	AFE		SUPERVIS	or teve Ha	sh
9.7  9.7  817 SIZE MFG 100  7R 6-1/4" SDE 11 6-1/4" SDE	38				1	TOT	AL DEPTI	1	P	ROGRESS	,,,,,		LING TINE	ROP	1	FORMA			H. DEPTH	
9.7  SIT SIZE MF6  IC 6-1/4" SDE  1 6-1/4" SDE	38		RDR	1			PBTD	6624	1	MUD D	ΔΤΔ	<u> </u>		#DIV/0!			Sand		6,6	<u> </u>
R 6-1/4" SDE		WL		СК	РН	SAN		SOLIDS	%	PV	YP	GELS	DEPTH	DATE/TIME	CH	LORIDE	is (	CALCIUM	MBT S	ALT PPM
io.   SDE R 6-1/4" SDE I1 6-1/4" SDE		4.0	1	/32	7.0	0.5	0	3.0		12	16	8/12	67:50	8/17/04 5:00pm	12	26,00	0 4	12000		
'R 6-1/4" SDE	G.	TYPE	IADC	SERIAL	NO.		ETS (1/32		Т	BIT DA	OUT	FOOTAGE	HOL RS	ROP	-	MTR	RPM	WOB	DULL C	ONDITION
11 6-1/4" SDE	BS SI	EB709	617Y	10556	908	13	or TFA		3 :	5665	5786	14	1.(0	14.0		<b>→</b>	50/130	20	ТВ	G
2 6-1/4" SDI		EB709	617Y	10553		13	13	_	_	$\overline{}$	6280	494	49.00	10.1	$\exists$	Ÿ	50/130	20	H	
<del>   </del>	BS SI	EB709	617Y	10556	911	13	13	1	3 (	3280	6750	470	33.50	14.0		Υ	25/125	8-10		
		L												<u> </u>						<u></u>
PUMP MANUFAC	CTURER	LINER	STROKE	GAL / STK	SPN		HYDR.	AULIC	AV DO	PUME	> N	TR DIFF		HHP 'IN <sup>2</sup>	EC	D.	1	SLOW 28 spm		_
NO			LENGTH			_	_			PRESS	s.	PRESS.					2		40spm	
1 Wilson 2 Wilson		5" 5"	14	3.8	-		0			-	+						5950' 5950'	350	600	$\vdash$
Both	500			. J.J							1						2300		, 550	<u> </u>
		ORILL S										GEOL				ゴ		GENER		
BOTTOMHOLE ASSE	EMBLY	LENGTH		O.D.		.D.	FOF	MATION	4	MD	+	TV	/D	LITHOLOG	Υ	$\dashv$	Rig No:	RIG	NFO (435) 9	79.46
														<u> </u>			Cell No.			
											$\perp$	GAS D	, <del>, , , , , , , , , , , , , , , , , , </del>	<u> </u>			Last BO	P Test		7/2
			_				вотто		IME	BG GAS	7	CONN	IGAS	TRIP GAS	i	#	Next BC			8/20
			+					35 SUNITS		FROM	<u> </u>	SHO		ROP (FT/HF	<b>3</b> 1	_	Last Sa		ting	8/1 8/1
								3 014113	$\exists$	TROM				KOF (FINI)	·/		Last Op		oe Rams	
											$\perp$						Last Op	erate Bli	nd Ram	8/1
							<b> </b>		-	•••	+			<u> </u>		$-\parallel$	Last Op	erate An	nular	8/4
					1		┢		+		+	<del></del>		<del> </del>		╅	-			<b></b> -
																			*******	
							-		_		-	<del></del>								
					<del> </del>		ļ				+			<u> </u>		-				
Total BHA:		0.	00								1			<del>                                     </del>						
STRING WT. BH	HA WT.	PU WT.		SO WT.	ROT. 1	ORQUE		LEVATI	ON	GL TO KB	Ŧ	KB ELE\ 5,8		INTERMEDIATE		-	4-1/2" (		NEXT	CASING
1		.,			1		ξ .	,035		SURVE	YS	5,0		7" @ 543	55		4-1/2	ŷ 0000	l	
	AZIMUTH		SECTION	N+ / S-	E+/V			rool.	MD	INCL.		ZIMUTH		CVT	SECT	ION	N+ / S-	E+/W-	DLS	TOO
	288.70 281.80					$\neg$		nwd nwd	6,71	5.70	)   2	80.40		6684					0.87	mw
,,,,,,	201.00								D/	ILY AC	TIVI	ΓY								
FROM TO	HRS		24 HOURS			0" 0 0					- / 5									
6:00 7:30 7:30 6:00	1.50 22.50													ith hanging wt o ck, install cap fla			ellhead			
														gas buster, cho						
							ting h	ead 8	othe	r renta	l iten	ns. Pre	ssure wa	ash derrick, floor	& su	ıb				
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COST DATA

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

# CONFIDENTIAL PLEASE!

December 18, 2004

Mr. Dustin Doucet Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801

Re:

Wolverine Federal 17-2 well Sec 17 T23S R01W Sevier Co., UT API# 43-041-30031

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find attached daily reports for the period August 24, 2004 through December 2, 2004 reflecting the well's completion and first production in November 2004. This concludes our daily reporting of operations as the well is now in production mode and the required production reporting will be done by Wolverine's Michigan office

Also enclosed is one copy of BLM form 3160-4 Well Completion Report & Log, recently filed with the Bureau of Land Management. Well logs will be submitted under separate cover by Wolverine's Grand Rapids, Michigan office. If alternate UDOGM reports are preferred please contact us and we will submit those that are requested. Enclosed also is a copy of our BLM sundry notice giving 5<sup>th</sup> business day notice of the well's production. Please maintain all of the enclosed information CONFIDENTIAL.

As always, please contact either Wolverine or me if there are further questions.

Very Truly Yours,

Steven R. Hash Agent for Wolverine Gas and Oil Company of Utah, LLC RECEIVED

DEC 2 / 2004

DIV. OF OIL, CAS & LITHING

copy with enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Richard Moritz, Sue Benson

EXACT Engineering, Inc.

well file

Petroleum Engineering Consulting, Personnel & Jobsite Supervision complete well design, construction & management, drilling, completion, production, pipelines, appraisals, due diligence, acquisitions, procedures, temporary personnel and field supervision

Form 3160-5 (April 2004)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED	
OM B No. 1004-0137	
Expires: March 31, 200	Ì

Ī	BUREAU OF LAND MAN	AGEMENT			
	NOTICES AND REF		LLS	5. Lease Seri UTU-73	
Do not use tl	nis form for proposals t ell. Use Form 3160 - 3 (a	o drill or to re-	enter an	6. If Indiar	n, Allottee or Tribe Name
SUBMIT IN TR	IPLICATE- Other insti	ructions on reve	rse side.		r CA/Agreement, Name and/or No.
1. Type of Well Oil Well	Gas Well Other			8. Well Na	
2. Name of Operator Wolverine G	as & Oil Co of Utah, LLC			9. API We	rine Federal #17-2 ell No.
3a Address One Riverfront Plaza, 55 Cam	pau NW, Grand Rapids, MI	3b. Phone No. (include 616-458-1150	le rea cocle)	430413	
4. Location of Well (Footage, Sec.,		1 333 333	***************************************		nd Pool, or Exploratory Area
830' FSL & 1910' FWL, Section	on 17, T23S, R1W				or Parish, State  Co, UT
12. CHECK A	PPROPRIATE BOX(ES) TO	INDICATE NATU	RE OF NOTICE, I	REPORT, OF	R OTHER DATA
TYPE OF SUBMISSION		TY	PEOF ACTION		
If the proposal is to deepen dire Attach the Bond under which t following completion of the in testing has been completed. Fi determined that the site is ready  Please be informed that fi separation, treating and s conjunction with the King	ectionally or recomplete horizontall he work will be performed or provi volved operations. If the operation nal Abandonment Notices shall be y for final inspection.)	y, give subsurface location de the Bond No. on file results in a multiple comfiled only after all requirement stock tanks occur ject well is located of overy well. Likewise,	on; and measured and to with BLM/BIA. Requi plation or recompletion en ents, including reclar red on Nov 23, 2004 fsite, approximately FIRST OIL SALES	any proposed we use vertical depth red subsequent in a new intervanation, have been from the Wol 1/2 mile due no occurred on	verine Federal #17-2 well. The orth, adjacent to and in
14. I hereby certify that the fore Name (Printed/Typed) Steven R Hash -	egoing is true and correct  EXACT Engineering (918-599	0-9400) Title (	Consulting Engineer	for Wolvering	e Gas & Oil Co of Utah, LLC
~~	R. Harl	Date		12/18/2004	Coas & On Co of Utall, LLC

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Ti le

Date

Of fice

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah page 8 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PETD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ESP set @ 5030' GL to RKB: 12'

#### "TIGHT HOLE"

12/01/04 Well pumping (electric submersible on generator)

Pumped 136 BO, 1 BW in 7 hrs

PTP 90 psig, 18/64" chk, FCP 50 psig, ESP speed 55lnz, amps 32.5

Flowline psi @ wellhead 50 psig, @ treater inlet 80 ps g, treater 30 psig, 140° F, running on propane; gas TSTM

Casing Fluid Level by Echometer:

Comment: Hard freeze, 10 degr below zero, lost approx 200 BO in tank pad overnight due to frozen oil dump line in btm of stock tank, hi-level shut down failed, fluid escaped thru treater vent line, all oil contained in diked treater pad, down 17 hrs.

Total oil produced this month 2963 BO (thru battery) Total water produced this month 21 BW (thru battery)

Total oil sales past 24 hrs 841 BO + zero bbls test oil = 841 BO Total oil sales this month 2718 BO + 1107 bbls test oi = 3825 BO

Cumulative oil production this completion 4070 (production thru battery + test oil sales only)

CMOL S. Hash

12/02/04 Well pumping (electric submersible on generator) This reptieff. 2pm 12/1/04 – Last report for month Pumped 44 BO, 0 BW in 2 hrs

PTP 90 psig, 18/64" chk, SICP 320 psig, ESP speed 55-69hz

Flowline psi @ wellhead 50-100 psig, @ treater inlet 80-140 psig, treater 30 psig, 140° F, running on propane; gas TSTM

Casing Fluid Level by Echometer:

Comment: Returned well to production, sub-zero cold.

Total oil produced this month 3007 BO (thru battery)

Total water produced this month 21 BW (thru battery)

Total oil sales past 24 hrs 0 BO + zero bbls test oil = 1) BO

Total oil sales this month 2718 BO + 1107 bbls test o I = 3825 BO

Cumulative oil production this completion 4114 (production thru battery + test oil sales only)

CMOL S. Hash

# FINAL REPORT THIS COMPLETION - TRANSFERRED TO DAILY PRODUCTION REPORT

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah page 7 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PETD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ES P set @ 5030' Gl. to RKB: 12'

#### "TIGHT HOLE"

PTP 100 psig, 18/64" chk, SICP 220 psig, ESP speed 55 hz, amps 31.4

Flowline psi @ wellhead 30 psig (new gauge), @ treater inlet 58 psig, treater 28 psig, 129° F,

running on propane; gas TSTM

Casing Fluid Level by Echometer: 4611'??

Comment: Increased pump speed from 50hz to 55hz, no incr in PTP, monitoring fluid level

Total oil produced this month 1705 BO (thru battery) Total water produced this month 7 BW (thru battery)

Total oil sales past 24 hrs 563 BO + zero bbls test oil = 563 BO

Total oil sales this month 1302 BO + 813 bbls test oil = 2115 BO

Cumulative oil production this completion 2518 BO (production thru battery + test oil sales only)

CMOL S. Hash

#### 11/29/04

Well pumping (electric submersible on generator)

Pumped 513 BO, 9 BW in 24 hrs, target rate = 500 bopd

PTP 100 psig, 18/64" chk, FCP 60 psig, ESP speed 58 hz, amps 32.5

Flowline psi @ wellhead 60 psig, @ treater inlet 54 psig, treater 30 psig, 128° F, running on propane;

gas TSTM
Casing Fluid Level by Echometer: 1142' (good shot by turning off ESP & gen set)

Comment: Cannot incr pump output, incr pmp speed fr 55 to 60hz, no incr in PTP or flowrate, opnd csg to flowline 225 to 60 in 1 min, flwg at 60 psig; reversed ESP rotation – no success, suspect pump deficiency, will continue to troubleshoot.

Total oil produced this month 2218 BO (thru battery)

Total water produced this month 16 BW (thru battery)

Total oil sales past 24 hrs 288 BO + 294 bbls test oil = 582 BO

Total oil sales this month 1590 BO + 1107 bbls test o I = 2697 BO

Cumulative oil production this completion 3325 BO (production thru battery + test oil sales only)

CMOL S. Hash

#### 11/30/04

Well pumping (electric submersible on generator)

Pumped 609 BO, 4 BW in 24 hrs

PTP 120 psig, 18/64" chk, FCP 60 psig, ESP speed 58 hz, amps 32.5

Flowline psi @ wellhead 36 psig, @ treater inlet 55 psig, treater 29 psig, 122° F, running on propane; gas TSTM

Casing Fluid Level by Echometer:

Comment:

Total oil produced this month 2827 BO (thru battery)

Total water produced this month 20 BW (thru battery)

Total oil sales past 24 hrs 287 BO + zero bbls test oil = 287 BO

Total oil sales this month 1877 BO + 1107 bbls test cil = 2984 BO

Cumulative oil production this completion 3934 (production thru battery + test oil sales only)

CMOL S. Hash

# EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah page 6 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PBTD 6698' on 10/23/04 Perfs 63/78 - 6388 on 10/23/04 Perfs 63/10-6334' on 10/28/04 ESP set @ 5030' GL to RKB: 12'

#### "TIGHT HOLE"

gas TSTM

Casing Fluid Level by Echometer: NA.

Comment: continued to adjust well & treater pressures, water level coming up gradually in treater, not dumping yet. <u>FIRST OIL SALES to Summit Energy on Nov 23, 2004 via GIANT Trkg</u>, sold 265 bbls test oil out of frac tank on location CMOL S. Hash

11/26/04 Well pumping (electric submersible on generator)

Pumped 148 BO, 0 BW in 8 hrs from 6am to 2pm, short gauge period to get on 2pm daily gauge cycle. Target rate = 500 bopd

PTP 200 psig, SICP 220 psig, 16/64" chk, ESP speed 50 hz, amps 29.3

Flowline psi @ wellhead 70 psig, @ treater inlet 69 psig, treater 28 psig, 130° F, running on propane; gas TSTM

Casing Fluid Level by Echometer: 290' fs.

Comment: continued to adjust well & treater pressures, water level coming up gradually in treater, not dumping yet. Sold 270 bbls test oil out of frac tank on location to Summit Energy via GIANT Trkg. ~ 1000 bbls test oil remains to be sold.

Total oil produced this month 734 BO (thru battery)
Total water produced this month 0 BW (thru battery)

Total oil sales past 24 hrs 462 BO + 270 bbls test oil = 732 BO Total oil sales this month 462 BO + 535 bbls test oil = 397 BO

Cumulative oil production this completion 1269 BO (production thru battery + test oil sales only)
CMOL S. Hash

11/27/04

Well pumping (electric submersible on generator)

Pumped 476 BO, 0 BW in 24 hrs from 2pm to 2pm, target rate = 500 bopd

PTP 100 psig, 18/64" chk, SICP 220 psig, ESP speed 50 hz, amps 29.2

Flowline psi @ wellhead 70 psig, @ treater inlet 68 psig, treater 28 psig, 128° F, running on propane; gas TSTM

Casing Fluid Level by Echometer: na

Comment: water level coming up gradually in treater, opened valve to water tank at end of day. Sold 278 bbls test oil out of frac tanks on location to Summit Energy via GIANT Trkg. ~ 750 bbls test oil remains to be sold.

Total oil produced this month 1210 BO (thru battery)

Total water produced this month 0 BW (thru battery)

Total oil sales past 24 hrs 277 BO + 278 bbls test oil = 555 BO

Total oil sales this month 739 BO + 813 bbls test oil = 1552 BO

Cumulative oil production this completion 2023 BO (production thru battery + test oil sales only) CMOL S. Hash

11/28/04 Well pumping (electric submersible on generator)

Pumped 495 BO, 7 BW in 24 hrs, target rate = 500 bcpd

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Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah page 5 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PBTD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ESP set @ 5030' GL to RKB: 12'

"TIGHT HOLE"

11/17/04 SITP 415 psi

Move in B Jackson & Horizontal Directional Drilling, bore SH 24 & pull thru 202' of 3-1/2" .30" wall sch 80, Gr B, ERW line pipe, w/ 12 mil fusion bond epbxy coating plus 25 mil "powercrete" overcoating from Shawcor Coaters in SLC. Move bore machine to Peterson Creek, SDFN. Prep to begin screwing 2-7/8" tbg flowline tomorrow.

11/18/04 SITP 415 psi

Shut-in waiting on pipeline

Completed bore of Peterson Creek and pulled thru 203' of 3-1/2" .30" wall sch 80, Gr B, ERW line pipe (same as above). String and screw together 2-7/8" 6.5ppf J55 tbg as temporary flowline from SH 24 to Peterson Creek and from Peterson Creek to CPF treater facility. Will plumb wellhead and lay the well to SH 24 portion and make tie-ins on Friday 11/19, then hydrotest Sat 11/20. Presently completing heater-treater plumbing at CPF treater site at pad "A" near KMR 17-1. 18,000 gal skid mounted propane cylinder scheduled for delivery on Fri 11/19. ECI to complete basic level of shutdown & callout notification instrumentation on Thur 11/18.

11/19/04 SITP 415 psi

Shut-in waiting on pipeline

Will make tie-ins today & hydrotest flowline Sat, instrumentation in progress, completing main discharge valve set for treater facility, running fuel, sa es and air lines today. Propane cylinder delayed. Working to turn #17-2 on thru treater facility this weekend

11/20/04 SITP 415 psi

thru Shut-in waiting on treater facility

Tie-in flowline at crossings, hydrotest to 750 psi for 8 hrs, cil & water lines completed to discharge valve set & into temp battery, set 18,000 gal propane cylinder & laid fuel line to 17-2 treater, dressed out treater & tied in flowline, built combination hookup at 17-2 wellhead. Need gas vent & air lines, expect to fire 17-2 treater mid day Monday, 11/22.

11/23/04 SITP 415 psi

Continued to finalize treater hookup, laid 1" poly air supply lines and set (2) 4cfm air compressors at 17-2 & treater facility for control air, fired treater, warried to 110 degr, began pumping test oil from frac tanks on 17-2 thru flowline to treater facility, filled treater, water dump float not operating properly, SDFN.

Emptied 120 bbl fluid from treater, removed float trunion, exchanged float parts with 17-1 treater, replaced trunion, loaded vessel, started 17-2 ESP @ 6pm, attempted to adjust wellhead hi-lo valve and treater inlet hi-lo valve with well pumping, unsuccessful, recv 187 bbl oil while adjusting well, SDFN @ 11pm.

Installed Kimray 2150 SMT backpressure valve before treater hi-lo to stabilize inlet flow, started pump @ 12:45pm and adjusted control valves on we lhead & flowline.

Well pumping (electric submersible on generator)

Pumped 312 BO, 0 BW in 17.25 hrs from 12:45pm to 6am. Target rate = 500 bopd PTP 650 psig, SICP 220 psig, 10/64" chk, ESP speed 50 hz, amps 29.3

Flowline psi @ wellhead 70 psig, @ treater inlet 69 psig, treater 28 psig, 130° F, running on propane;

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Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W

Sevier Co., Utah

page 4 of 8

**New Completion** 

4-1/2" 11.6# N80 @ 6698' PBTD

PETD 6698' on 10/23/04

Perfs 6378 - 6388 on 10/23/04 Perfs 6310-6334' on 10/28/04

ESP set @ 5030'

GL to RKB: 12'

"TIGHT HOLE"

cont.

RIH w/ 5000' #4 Flat SN 62C-2624BB

11/02/04

Started ESP @ 2:30 PM. Turned through separator © 4:00 PM. SI well @ 6:30 PM. Produced 144 bbl in 4 ½ hrs (32 b/hr). Shot FL before SI. FL 195' from surface. PTP 60 psi. SICP 10 psi. SDFN.

CMOL. S.Betts.

Complet on AFE \$515,450 Est CCC \$ 447,242 Est DCC \$ 79,691

Est Total Well Cost to date \$2,728,927 Est DHC \$ 2,281,685

SITP 415 psi, SICP 10 psi, (12 hrs) Started ESP @ 76m, pumped 12 hrs on test and recovered 461 11/03/04

bbl fluid, cannot determine water content, samples 10 )% oil, no gas vented. Attempted fluid shot @ 7pm - no reading - casing may be full. SWI @ 7pm, test concluded. Expect to lay temporary flowline next week - presently connecting oil treater (a) treater facility. 1643 BO produced this

completion. Daily cost incl 6x25 treater.

Est CCC \$ 475,397 Completion AFE \$515,450 Est DCC \$ 28,155

Est Total Well Cost to date \$2,757,082 Est DHC \$ 2,281,685

SITP 415 psi, SICP 410 psi (36 hrs) Well shut in waiting on treater facility 11/04/04

Completion AFE \$515,450 Est CCC \$ 476,257 Est DCC \$ 860

Est Total Well Cost to date \$2,757,942 Est DHC \$ 2,281,685

SITP 415 psi, SICP 410 psi (60 hrs) 11/05/04

COMPLETION DATE - Nov 1, 2004; FIRST OIL PRODUCTION date - Nov 1, 2004

Comple ion AFE \$515,450 Est CCC \$ 477,117 Est DCC \$ 860

Est Total Well Cost to date \$2,758,802 Est DHC \$ 2,281,685

11/06/04 SITP 415 psi

Shut-in waiting on pipeline To

11/10/04

SITP 415 psi 11/11/04

Shut-in waiting on pipeline

Strung 500' of 3-1/2" linepipe for SH 24 & Peterson Creek crossing

SITP 415 psi 11/12/04

Shut-in waiting on pipeline

Welded two sections for bores, Utah inspection x-rayed welds, coated joints, ready for B Jackson

Construction to make both bores. Delayed move-in until Monday 11/15 due to wet weather

Expect temp pipeline to be complete by Friday 11/19 04

11/13/04 SITP 415 psi

Shut-in waiting on pipeline To

11/15/04

SITP 415 psi 11/16/04

B Jackson Construction to move in tomorrow

EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

# **Daily Completion Report**

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah page 3 of 8

New Completion 4-'/2" 11.6# N80 @ 6698' PBTD PE.TD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ES P set @ 5030' Gl. to RKB: 12'

#### "TIGHT HOLE"

MIRU HALCO to tbg. Pump & test lines to 6000 psi. Pumped 5 bbl 4% KCL pad + 2500 gal 7 ½% FEHCL + Moroflo III + HAI-404 + 150 Bioballs + 25 bb 4% KCL flush. AIR 4.3 bbl/min @ 3000 psi. ISDTP 933 psi, 1 ½ minutes tbg on vacuum. 90 bbl load to recover. RD & released HALCO. RU swab tools. BFL @ surface. Made 4 swab run, recovered 59 BW in 1 hr. Well flowing. Flowed 28 BO in 1 hr. CK well to 20/64" & turned into separator. Flowed additional 127 BO in 5 hrs. SI. ISITP 380 psi. 1 hr SITP 400 psi. SDFN. Total production both swab & flowed 155 BO, 59 BW. Est 1038 BO in frac tanks. CMOL S. Betts

10/31/04

14 hrs SITP 415 psi SICP 1000 psi. Killed tbg w/ 35 bbl 4% KCL. Released on/off tool, circulated hole w/ 120 bbl 4% KCL. Latched onto pkr, released & TOH. RIH w/ on/off half (w/o seals) & 201 ½ jts tbg. Tagged sand, reversed circulated sand off pkr, latched onto, released, & TOH w/ pkr (lost 20 while circulating hole). Install 7 1/16" 3M x 6 3/8" tbg bowl hanger flange under BOP. SI. SDFN. 55 BLWTR. CMOL S. Betts

5hrs SITP 0 psi SICP 0 psi. Finished installation of electricity to well head. Started generator. Hertz cycle on generator not stable. Worked on generator & ESP control. RD & released WSU. Tubing design as follows:

design a	as follows:	
1-	3-1/8" OD 46 hp, 940 v, 37 amp DMF-1	15.35' @ 5030
	Motor SN 21D-48777	
1-	3-1/8" OD gas separator/intake DPINT-1	5.40'
	SN 321D-53689	
1-	3-3/4" OD DC 750 128 stage DPMT -1 pump	11.39'
	SN 01D-68443	
1-	3-¾" OD DC 750 128 stage DPMT -1 pump	11.79'
	SN. 01D-68442	
1-	2-3/8" EUE 8rd 4.7# N-80 sub	6.05'
1-	jt 2 3/8" EUE 8rd 4.7# N-80	31.56'
1-	2-3/8" tbg check	.60' @ 4935
2-	jts 2 3/8" EUE 8rd 4.7# N-80	62.82'
1-	2 3/8" tbg drain	.40' @ 4872
155-	its 2 3/8" EUE 8rd 4.7# N-80	4,872.58'
1-	2 3/8" EUE 8rd clp x 2 7/8" EUE 8rd pin XO	<u>29'</u>
	•	5,018.23'
		12.00'
	_	5,030.23'
	Over all Set RKB Btm set @	12.00'

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### **Daily Completion Report**

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah

"TIGHT HOLE"

page 2 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PETD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ESP set @ 5030' GL to RKB: 12'

10/26/04

13hrs SITP 410#. Open to tk, flowed, .87 bbl. RU swab tools. BFL @ surface. Swabbed 30.6 bbl oil, in 5 runs in 1 ½ hrs. SI. MIRU HALCO to tbg. Pump & test lines to 6000 psi. Test well head valves to 5000 psi. Pumped 10 bbl 4% KCL pad + 1000 gal 7 ½% FEHCL + Moroflo III + HAI-404 + 60 Bioballs + 35 bbl 4% KCL flush. Formation broke ② 3800 psi. AIR 3.6 bbl/min @ 3400 psi. ISDTP 950 psi, 2 minutes tbg on vacuum. 70 bbl load to recover. RD & released HALCO. RU swab tools. BFL 300' from surface. Swabbed 59 BLV/ + 103 BO in 18 runs in 4 ½ hrs. Well flowing.

5:00 PM CK 14/64", FTP 125 psi. 5:00 AM 12 hrs production, CK 14/64", FTP 85 psi, 213 BO.

Open CK to 20/64". Est 409 BO in frac tanks. CMOL: S. Betts

10/27/04

10/28/04

22 hrs SITP 415 psi. MIRU Tefteller. RIH w/ Pressure recording bombs, making gradients stops on the way in. POH w/ bomb. BHT 188°. BHP 2632 psi. RIH & obtained two (2) fluid samples from perfs to be analyzed. POH w/ sample catcher. Flushed tbg w/ 25 bbl 4% KCL. RIH & installed 1.875" "XX" Blanking plug in profile nipple. PT blanking plug to 1000 psi. Held. RD & released SLU. Bleed pressure off tbg & csg. Released on/off tool half off profile nipple & POH w/ 11 jts. Circulated 1sx sand on top of RBP w/ 20 bbl 4% KCL. POH w/ tbg to 4700'. RU swab tools. Swabbed 20 bbl in 1 hr. Finished TOH w/ tbg & on/off tool half. SI. SDFN. CMOL. S. Betts Est DCC \$ 10,740 Est CCC \$ 299,182 Completion AFE \$ 515,450 Est Total Well Cost to date \$ 2,580,867

10/29/04

14 hrs SICP 0 psi. MIRU WellServ WLU. Perforate thru casing under lubricator the Lower Navajo 1 interval 6310-6334 (24') with 4 jpf (96 holes) per dens ty-neutron log dated 18-Aug-2004, using 3-1/8" slick gun, Titan 22.7 gm charges for .42" hole dia n and 38.39" penetration, POOH. FL before perf 1980' from surface, after perf 1850' from surface (130' entry). Set a 4-1/2" x 2-3/8" Arrow AS1X retrievable csg pkr on wireline (1.875" min id) with on/off half (1.87 "X" profile) and glass disk in place w/ top @ 6247' & btm @ 6263' kb, POOH. FL after setting pkr 250' from surface (1730' total entry [1980-250-]). TIH w/ on/off half on 198 jts tbg & 2 tbg subs (1-8' & 1-10'), latch, pull test, land in BOP with 20k comp on pkr. Screw tree on top of tbg, load csg, close rams & PT csg & pkr to 1000 psi, hold. RU WL & TIH w/ sinker bars (1-11/16' max od). FL @ surface, break disk, no chg in fluid level, POOH, RDWL. RU swab tools. IFL @ surface. Swabbed 17 BO, 20 BW, in 4 runs in 1 hr. Well kicked off & flowed 28 bbls in 70 minutes. Turned into separator, CK 20/64" FTP 30 psi. 5:00 PM - 6:00 AM, 13 hrs, CK 20/64, FTP 35#, 317 BO. Total swabbed & flowed for day, 362 BO, 20BW. Separator did not vent any gas by-passed separator @ 10:00 PM. CMOL S. Betts Est CCC \$ 317,656 Completion AFE \$ 515,450 Est DCC \$ 18,474 Est Total Well Cost to date \$2,599,341 Est DHC \$ 2,281,685

EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

Petroleum Engineering Consulting, Persor nel & Jobsite Supervision
Complete well design, construction & management, drilling, completion, production, pipelines, evaluations, due diligence, acquisitions, procedures, temporary personnel and field supervision

**Daily Completion Report** Wolverine Gas & Oil Company of Utah, LLC

Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah

page 1 of 8

New Completion 4-1/2" 11.6# N80 @ 6698' PBTD PBTD 6698' on 10/23/04 Perfs 6378 - 6388 on 10/23/04 Perfs 6310- 6334' on 10/28/04 ESP set @ 5030'

"TIGHT HOLE"

FIRST COMPLETION REPORT - during October cleaned location, removed mud soaked dirt to 10/21/04 nearby landfill, replaced with dry material, roadbase & 1-1/2" minus rock chip material. Fenced 4th side of reserve pit per BLM. Waiting on completion rig while obtaining pipeline ROW permits & building treater facility at 17-1 location (Pad A). Set 11"-3m x 7-1/16"-5m tbg head "B" section with 7-1/16" 5m single master tree & 2-1/16" single wing valve. Offload 215 its of 2-3/8" 4.7ppf N80 EUE 8rd new tha. Hookup manifold & flowline to test equipment & (4) 500 bbl frac tanks.

MIRU Pool Well Service DD WSU #824. Todd Farley Tool Pusher. Set open top 100 bbl tank and 10/22/04 Triplex pump. SDFN. CMOL: R Klein

> Est DCC \$ 37.895 Est CCC \$ 210,571

Completic n AFE \$ 515,450

GL to RKB: 12'

Est DHC \$ 2,281,685

Est Total 'Nell Cost to date \$ 2,492,256

Held safety meeting w/ crew and went over job proced are. NU WF 7-1/16 5m hydraulic BOP (2-3/8" 10/23/04 rams on top: CSO ram on the bottom). Pressure test csq and lines to 3000 psi f/ 10 min. OK. Test FT flow line to 500 psi. OK. PU 3-7/8" od tri-cone bit, 4-1/2" 11.6# csg scraper, bit sub xo, 2-3/8" standard SN w/ 1-25/32" ID and RIH w/ 2-3/8" 4.7#/ft N-80 EUE TBG. Rabbit each joint while TIH. Tag PBTD @ 6698' w/ 212 jts + 19' of jt 213, LD last jt left 212 its in hole @ 6679'. RU HALCO to csg. Held safety meeting re pump job. Test pump and lines to 3000 psi, OK. Pump tbg cleanup and displacement as follows: 15 bbls caustic acid. 12 bbls of chemical wash, 24 bbls of 8% KCL flush, 7 bbls of 7-1/2% HCL acid. & 12 bbls of flush all @ 3 BPM, increased rate to 5 BPM and finished pumping 104 bbls of flush. Pumped a total of 202 bbls @ an avg rate of 5 BPM @ 1700 psi. Secure CMOL: R Klein well, RD HALCO and SDFN.

Est CCC \$ 234,574 Est DCC \$ 24.003 Est DHC \$ 2,281,685

Completion AFE \$ 515.450

Est Total Nell Cost to date \$ 2,516.259

10/24/04

RU swab, swabbed 20 blw & lowered fluid level in csg to 2000' fs. Rig for tbg, LD 11 jts & POOH w/ tbg & LD tools. RU WellServ WLU & run CBL-VDL-CCL loci from PBTD 6684' to 4410' in 4-1/2" csq. TOC @ 5610' (planned TOC 5200'). Ran GR-JB to 6400'. Perforate thru casing under lubricator the Lower Navajo 1 interval 6378-6388 (10') with 4 jpf (40 noles) per density-neutron log dated 18-Aug-2004, using 3-1/8" slick gun. Titan 23 gm charges for .41" hole diam and 35" penetration, POOH. Set a 4-1/2" x 2-3/8" Arrow AS1X retrievable csg pkr on wi eline (1.875" min id) with on/off half (1.87 "X" profile) and glass disk in place w/ top @ 6356' & btm @ 6372' kb, POOH. TIH w/ on/off half on 202 jts tbg, latch, pull test, land in BOP with 15k comp on pkr. Screw tree on top of tbg, load csg, close rams & PT csq & pkr to 1100 psi, hold. RU WL & TIH w/ sinker bars & CCL (1-11/16" max od). FL 2100' fs, break disk, no chg in fluid level, POOH, RDWL, SW1&SDFN @ 9:30pm CMOL: R Klein Completion AFE \$515,450 Est DCC \$ 22,887 Est CCC \$ 257,461

Est DHC \$ 2,281,685

Est Total Well Cost to date \$2,539,146

10/25/04

9hr SITP zero, SICP 1100 psi. Open well, slight blow, BFL surface. Swabbed 20 blw & 64 bbl new oil in 8 hrs swabbing, EFL 5500' fs, last hr 2.5 bph, 100% oil cut, no visible water, crude oil appears identical to Navajo in KMR 17-1. SWI&SDFN @ 5:45pm. This am 13hr SITP 410psi CMOL: S Hash Completion AFE \$ 515,450 Est CCC \$ 263,469 Est DCC \$ 6,008

Est DHC \$ 2,281,685

Est Total Well Cost to date \$2,545,154

Wolverine Gas & Oil Company of Utah, LLC Wolverine Federal #17-2 well SE SW Sec 17 T23S - R01W Sevier Co., Utah

NO reports August 24 thru Oct 20, 2004 Waiting on completion rig

	Engineering & Supervision					ion	EXACT Engineering, Inc.								(918) 599-9400						
	Wolver						DAILY DRILLING REP								API# 43-041-30031						
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7:30 6:0	00 22	.50	ND	BOP	E, rough	n cut 4	-1/2"	& lay	down	ria n	n with	cmt he	ead. Re & chok	e skid	sta NI	ack, install cap f D gas buster, c	hoke &	panic li	nes		
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# WOLVERINE GAS AND OIL CORPORATION



Energy Exploration in Partnership with the Environment

December 28, 2004

Dustin Doucet
Petroleum Engineer
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, UT 84114

Re:

KMR 17-2 Well

Dear Dustin:

Enclosed, please find the following data for the above referenced well:

- One signed State of Utah Well Completion or Recompletion Report and Log
- One hard copy Core Descriptions Report
- One hard copy Fullwave Sonic Delta- T Plot
- One hard copy Wave Sonic Delta-T Log
- One hard copy EMI
- One hard copy Spectral Density Dual Space Neutron
- One hard copy Microlog
- One hard copy Dual Laterolog/MSFL
- One hard copy Mud Log
- CD containing additional well data

Please keep this report and all attachments confidential for as long as allowed under state guidelines. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Íohn Vrona

JV/hb Enclosures

cc: 17-2 Well Log file

DEC 3 0 2004

CONFIDENTIAL
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FORM	8

ENDED REPORT	FORM
ahliaht changes)	

						UTAH				I V I . I <i>I</i>	1L			REPORT 🗌	FORM
m		ı				URAL RESO SAS AND							ghlight ch EASE DESI	ianges) GNATION AND S	ERIAL NUMBER:
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1a. TYPE OF WEL	L:	O W	ELL 🔽	GA: WE	s 🗆	DRY		ОТН	IER					GREEMENT NAI ne Fed Ex	
b. TYPE OF WOR NEW WELL	RK: HORIZ.   LATS.		EEP-	RE-	TRY	DIFF. RESVR.		OTH	IER					and NUMBER: ne Federa	l #17-2
2. NAME OF OPER Wolverine		ınd Oil C	ompar	ny of Uta	ah, LL	С							PI NUMBER 430413	**	
3. ADDRESS OF C			ory <b>Gr</b> a	and Rap	oids	STATE MI	zı= 49{	503		E NUMBER: 16) 458-1	1150			ool, or wild ant Field	CAT
4. LOCATION OF				·								11.	QTR/QTR, S	SECTION, TOWN	SHIP, RANGE,
AT SURFACE:	830' F	SL & <del>19</del>	<del>01</del> ' FV			0 1700 E	=\A/I C/	00 17		: 12-1-		N	ESW :		01W 26
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7/2/2004		15. DATE 1 8/16/2	2004		11/1/			ABANDON		READY TO			GL 5	ATIONS (DF, RKE 835; DF 5846; K	B 5847
18. TOTAL DEPTH		6,750 6,724	1	9. PLUG BA		MD 6,698		20. IF	MULTIPLE (	COMPLETIONS	S, HOW N	MANY? *	21. DEPTH PLU	H BRIDGE MD G SET: TV	
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24. CASING AND	LINER REC	ORD (Report	all strings	set in well)				Υ							
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18.00"	14"				12		92			G	250	3		surface	zero
12.25"	9.63"	J55	36	5	12	1,	542			Lite	360		14	surface	zero
8.75"		D110	23	,	12	5	421			Type 5	280		2	1500'	zero
6.25"	7" 4.5"	P110			12		750	-		50:50 PZ	595 90		9	5610'	zero
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25. TUBING RECO	RD	<u> </u>								•					
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26. PRODUCING I				T			T			RATION REC		0175	luo uore	0 I DEDEO	DATION OTATIO
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FORMATION			058	<del>-6,7</del> 5		6,036	<b>_</b>		6,378		388   334	10' 24'	40 96	Open 🗸	Squeezed Squeezed
FORMATION			050	_0_75								/4	90	Open 🗸	
FORMATION (A) Navajo (B) Navajo			058	<del>-6,75</del>	<del>50</del>	6,036	╁		6,310	0,	<del>557</del>			Open	Suucezen
FORMATION  (A) Navajo  (B) Navajo  (C)			058	<del>-6,7</del> 5	, D	6,036			6,310		304			Open Open	Squeezed Squeezed
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FORMATION  (A) Navajo  (B) Navajo  (C)  (D)  28. ACID, FRACTU	JRE, TREA	6,				6,036		AM						+	
FORMATION  (A) Navajo  (B) Navajo  (C)  (D)  28. ACID, FRACTU  DEPTH	JRE, TREA	6,	ENT SQUE	EEZE, ETC.			60 BS			YPE OF MAT				Open	Squeezed
FORMATION  (A) Navajo  (B) Navajo  (C)  (D)  28. ACID, FRACTU	JRE, TREATINTERVAL	6,	ENT SQUE	ееzе, етс. ) gal 7-1	/2% N	IEHCL w/							DEC	+	Squeezed

GEOLOGIC REPORT

CORE ANALYSIS

DST REPORT DIRECTIONAL SURVEY

OTHER: Mud Log

Producing

✓ ELECTRICAL/MECHANICAL LOGS

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION

#### 31. INITIAL PRODUCTION

#### INTERVAL A (As shown in item #26)

DATE FIRST PR	ODUÇED:	TEST DATE:		HOURS TESTE	D:	TEST P RODUCTION	ON OIL - BBL:	GAS – MCF:	WATER ~ BBL:	PROD. METHOD:
11/1/2004	ļ	11/1/2004	4		12	RATES: →	461	0	0	pump
CHOKE SIZE:	TBG. PRESS. 415	CSG. PRESS. 415	API GRAVITY 42.00	BTU - GAS	GAS/OIL RATIO	24 HR FRODUC'TI RATES: →	ON OIL - BBL: 922	GAS - MCF:	WATER – BBL:	INTERVAL STATUS: comm w/ interval B
				IN	TERVAL B (As sho	wn in iteın #26)				
DATE FIRST PR 11/1/2004		TEST DATE: 11/1/2004	4	HOURS TESTE	:D: 12	TEST PRODUCTION RATES: →	ON OIL - BBL:	GAS – MCF:	WATER - BBL:	PROD. METHOD: pump
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR FRODUC'TI RATES: →	ON OIL BBL:	GAS – MCF:	WATER - BBL:	INTERVAL STATUS: comm/ w interval A
				IN	TERVAL C (As sho	wn in itera #26)				<del>.</del>
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTE	D:	TEST PRODUCTIK RATES: →	ON OIL - BBL:	GAS - MCF:	WATER BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR FRODUCTI RATES: →	ON OIL - BBL:	GAS MCF:	WATER - BBL:	INTERVAL STATUS:
		•		IN	TERVAL D (As sho	wn in iteın #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTE	D:	TEST P RODUCTION RATES: →	ON OIL - BBL:	GAS – MCF:	WATER BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR FRODUCTI RATES: →	ON OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

vented

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth inten al tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34.	FORMATION	(Log) MARKERS:
-----	-----------	----------------

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Twin Creek Limestone	5,690	6,002	DST #1; 5435' - 5860'; 7/29/04 Recover 4600' gas & emulsified mud	Top of Twin Creek Limestone	5.690
	i i		cut oil 31 bbls, 80% oil, 19% gas 1% BSW, 42 gravity API (see attached)	Base of Twin Creek Limestone	6.058
Twin Creek	5,716	5,746	Core #1-Cut 30', rec 30' (see attached)		6.058
Limestone	5,746	5,766	Core #2-Cut 20', rec 18' (see attached)	]	
	5,766	5,806	Core #3-Cut 40', rec 39.8'(see attach)		
Navajo	6,084	6,108	Core #4-Cut 24', rec 24' (see attached)		
	6,120	6,180	Core #5-Cut 60', rec 60.5' (see attach)	i	

35. ADDITIONAL REMARKS (Include plugging procedure)

None

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) John Prona
SIGNATURE John Prona

DATE 12-22-04

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previoually plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\*\*ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

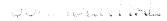
Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.



Wolverine Gas & Oil Wolverine Federal #17-2 SE/SW Sec. 17,T235,R1W Sevier Co., UT

Core #1	5716-5746	Cut 30'-Recovered 30'	Twin Creek Formation
5716	mudstone, fra with oil and li oil fluorescen	ctures are horizontal to nclinined with calcite and anhydrit	, tight, dense, microcrystalline, ed, massive, fractures are filled e, brown oil stain, yellow gold ce, yellow gold residual ring cut
5719	mudstone, ma mottled brown	ssive, very fine to fine sucros n oil stain, yellow gold oil flu	
5722	mudstone, ma	ssive, white anhydrite and ca	tight, dense, microcrystalline, lcite lining fracture openings, er show, slower cut, thiner ring.
5725	mudstone, ma	ssive, mottled brown of stair fluorescence, yellow gold re	tight, dense, microcrystalline, 1, yellow gold oil fluorescence, sidual ring cut fluorescence,
5728	mudstone, ma	ssive, mottled brown of stair fluorescence, yellow gold re	tight, dense, microcrystalline, 1, yellow gold oil fluorescence, sidual ring cut fluorescence,
5731	mudstone, ma stain, yellow g		



- LIMESTONE-medium to dark gray, hard, tight, dense, microcrystalline, mudstone, massive, mottled brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- **LIMESTONE**-medium to dark gray, hard, tight, dense, microcrystalline, mudstone, massive, bleeding oil on break point, brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- **LIMESTONE**-medium to dark gray, hard, tight, dense, microcrystalline, mudstone, massive, mottled brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- **LIMESTONE**-medium to dark gray, hard, tight, dense, microcrystalline, mudstone, massive, mottled brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- LIMESTONE-medium to dark gray, hard, tight, dense, microcrystalline, mudstone, massive, inclined wavy fracture (57 degree), oil running from core barrel, mottled brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.



Wolverine Gas & Oil Wolverine Federal #17-2 SE/SW Sec. 17,T23S,R1W Sevier Co., UT

Core #2 5746-5766 Cut 20'-Recovered 18' Twin Creek Format	nation
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- 5747.5 **LIMESTONE**-light to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, rubblized and fractured in part, fractures are horizontal to inclined, fractures are filled with oil and lined with calcite and anhydrite, brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- LIMESTONE-medium to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, abundant oil & drilling mud dripping from break point, fractures are horizontal to inclined, fractures are filled with oil and lined with calcite and anhydrite, brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- 5753.5 **LIMESTONE**-medium to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, fractures faces are stained with brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- 5756.5 **LIMESTONE**-medium to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, abundant oil & drilling mud dripping from break point, fractures are horizontal to inclined, fractures are filled with oil and lined with calcite and anhydrite, brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.
- 5759.5 **LIMESTONE**-light to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, rubblized and fractured in part, fractures are horizontal to inclined, fractures are filled with oil and lined with calcite and anhydrite, brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.



LIMESTONE-(Note-No Sample Taken)wavy to horizontal depositional laminations, medium to dark gray brown, hard, tight, dense, microcrystalline, mudstone, massive, fractures faces are stained with brown oil stain, yellow gold oil fluorescence, blue white cut fluorescence, yellow gold residual ring cut fluorescence, scattered fracture porosity.



Wolverine Gas & Oil Wolverine Federal #17-2 SE/SW Sec. 17,T23S,R1W Sevier Co., UT

Core#3	4746-5806 Cut 40'-Recovered 39.8' Twin Creek Formation
5768	LIMESTONE-gray brown, hard, tight, dense, microcrystalline to cryptocrystalline, mudstone, styolites, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.
5769	LIMESTONE-light to medium gray, very fine to fine crystalline, wavy to horizontal laminations, sucrosic texture in part, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.
5772	LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.
5775	LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.
5776	LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites vertical to horzontal, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.
5779	LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.



5782 LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, reworked with grain stone laminations, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. 5785 LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. 5788 LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. 5791 LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. LIMESTONE-gray brown, hard, dense, microcrystalline, mudstone, 5794 styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. 5797 LIMESTONE-gray brown, hard, dense, churned, bioturbated, burrowed, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut. LIMESTONE-gray brown, light colored shows reworking, hard, dense, 5800

microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.

5803

LIMESTONE-gray brown, light colored shows reworking, bioturbated, in part, calcite gulls, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.

5806

LIMESTONE-gray brown, light colored shows reworking, rubblized in part, bioturbated, in part, calcite gulls, hard, dense, microcrystalline, mudstone, styolites, inclined to horizontal depositional laminations, biotite flecks, massive, fractures filled with calcite, rare fractures with bleeding oil, yellow gold oil fluorescence from areas with oil stain, blue white milky cut fluorescence, yellow gold residual ring cut.

Wolverine Gas & Oil Wolverine Federal #17-2 SE/SW Sec. 17,T23S,R1W Sevier Co., UT

Core #4	6084-6108	Cut 24'-Recovered 24'	Navajo Formation
6086	medium (low silceous ceme package, hori gas and oil, ye		o poor sorted, clay matrix, osity, friable to firm, inter dune, even brown oil stain, bleeding blue white milky cut
6089	medium (low silceous ceme to black mine even brown o	ral divides laminations, 20 deg	o poor sorted, clay matrix, osity, friable to firm, dark gray gree deposional laminations, vellow-brown oil fluorescence,
6092	medium (lowersilceous cemes deposional land brown oil fluc		o poor sorted, clay matrix, osity, friable to firm, horizontal n, bleeding gas and oil, yellow-
6095	medium (lowersilceous ceme to wavy depos gas and oil, ye		o poor sorted, clay matrix, osity, friable to firm, horizontal n oil stain, increase in bleeding blue white milky cut
6098	medium (lowersilceous ceme to wavy depos gas and oil, ye	,	o poor sorted, clay matrix, osity, friable to firm, horizontal n oil stain, increase in bleeding blue white milky cut

SANDSTONE-white, clear, quartzose, light gray brown, fine (upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix, silceous cement, 12-14% inter granular porosity, friable to firm, horizontal to wavy deposional laminations, even brown oil stain, increase in bleeding gas and oil, yellow-brown oil fluorescence, blue white milky cut

fluorescence, yellow gold residual ring cut fluorescence.

SANDSTONE-white, clear, quartzose, light gray brown, very fine(upper) to fine (lower) grained, sub angular, fair to poor sorted, clay matrix, silceous cement, 6-8% inter granular porosity, friable to firm, light mineral banding, horizontal to wavy deposional laminations, even brown oil stain, yellow-brown oil fluorescence, blue white milky cut fluorescence, yellow

gold residual ring cut fluorescence.

SANDSTONE-white, clear, quartzose, light gray brown, very fine(upper) to fine (lower) grained, sub angular, fair to poor sorted, clay matrix, silceous cement, 6-8% inter granular porosity, friable to hard, light mineral banding, horizontal to wavy deposional laminations (toe set), even brown oil stain, yellow-brown oil fluorescence, blue white milky cut

fluorescence, yellow gold residual ring cut fluorescence.



Wolverine Gas & Oil Wolverine Federal #17-2 SE/SW Sec. 17,T23S,R1W Sevier Co., UT

Core #5	6120-6180	Cut 60'-Recovered 60.5'	Navajo Formation
6121	medium (upp siliceous cem gas, brown oi	E-white, clear, quartzose, ligh er) grained, sub angular, fair thent, friable, 10-14% inter grand stain, yellow oil fluorescency yellow gold residual ring, bro	o poor sorted, clay matrix nular porosity, bleeding oil and e, blue white milky cut
6124	medium (uppoement, friable fractures, horroil stain, yello	E-white, clear, quartzose, ligh er) grained, sub angular, poor le, 10-12% inter granular poro izontal depositional lamination will fluorescence, blue white esidual ring, brown black oil r	sorted, clay matrix siliceous sity, styolites, vertical ns, bleeding oil and gas, brown e milky cut fluorescence,
6127	medium (lowersiliceous ceme) (30deg.), blee	E-white, clear, quartzose, lighter) grained, sub angular, fair to ent, friable, 10-14% inter granteding oil and gas, brown oil stalky cut fluorescence, yellow g	o poor sorted, clay matrix aular porosity, cross bedded
6130	medium (lowe siliceous ceme (30deg.), blee	E-white, clear, quartzose, lighter) grained, sub angular, fair to ent, friable, 10-14% inter granding oil and gas, brown oil stalky cut fluorescence, yellow g	o poor sorted, clay matrix ular porosity, cross bedded
6133	medium (lowe siliceous ceme (15-20deg.), b	•	o poor sorted, clay matrix

- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-12% inter granular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, silty matrix in part, clay filled, 6-8% inter granular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 8-10% inter granular porosity, banded with white mineral, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity,horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.

- SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% intergranular porosity, horizontal to wavy depositional laminations, bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, cross bedded (30 deg.), bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, dark bedding laminations, bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, dark bedding laminations, bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.
- SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, cross bedded (40 deg.), 3-4" spacing, bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.

6173

SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, cross bedded (5-10 deg.), bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.

6176

SANDSTONE-white, clear, quartzose, light brown, fine (upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, cross bedded (35 deg.), bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.

6180

SANDSTONE-white, clear, quartzose, light brown, fine (lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix siliceous cement, friable, 10-14% inter granular porosity, cross bedded (5-10 deg.), bleeding oil and gas, strong hydrocarbon odor, brown oil stain, yellow oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring, brown black oil ring.





Job Number: WYO0704D132

State/Country: Ut,Seiver Company: Wolverine Gas And Oil of Utah LLC Declination: 12.93592

Lease/Well: Wolverine Federal # 17-2

Grid: 0.93

Location: Sec 17,T23S,R1W

File name: C:\SURVEY\WOLVER~1\17-2.SVY

Rig Name: CDX #10

Date/Time: 19-Aug-04 / 10:47

RKB: SHL:830 FSL & 1901 FWL Sec 17

G.L. or M.S.L.: BHL: 660 FSL & 1980 FWL Sec 17

Curve Name: Sidetrack

#### WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method Vertical Section Plane 155.08 Vertical Section Referenced to Wellhead Rectangular Coordinates Referenced to Wellhead

	Measured Depth FT	Incl Angle Deg	Drift Direction Deg	Course Length FT	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	C L O S Distance FT	U R E Direction Deg	
	80.00	.00	.00		80.00	.00	.00	.00	.00	.00	.00	
	125.00	.50	268.40	45.00	125.00	01	20	08	1.11	.20	268.40	
	248.00	1.00	257.10	123.00	247.99	26	-1.78	51	.42	1.80	261.68	
	338.00	1.40	254.80	90.00	337.97	72	-3.61	86	.45	3.68	258.65	
	428.00	1.90	251.60	90.00	427.93	-1.48	-6.08	-1.22	.56	6.26	256.30	
	516.00	2.20	250.30	88.00	515.87	-2.51	-9.06	-1.54	.34	9.40	254.49	
	603.00	2.70	246.00	87.00	602.79	-3.91	-12.50	-1.72	.61	13.10	252.64	
	690.00	3.30	241.30	87.00	689.68	-5.95	-16.57	-1.59	.74	17.60	250.26	
	786.00	3.40	236.40	96.00	785.51	-8.85	-21.36	98	.32	23.12	247.50	
	881.00	3.50	230.20	95.00	880.34	-12.26	-25.94	.19	.41	28.69	244.70	
	975.00	3.80	229.70	94.00	974.15	-16.11	-30.52	1.75	.32	34.51	242.17	
	1070.00	3.40	218.70	95.00	1068.96	-20.35	-34.68	3.84	.84	40.21	239.60	
	1164.00	2.50	220.10	94.00	1162.84	-24.09	-37.74	5.94	.96	44.78	237.45	
	1259.00	1.70	216.60	95.00	1257.77	-26.81	-39.92	7.49	.85	48.09	236.12	
1	1354.00	2.10	213.90	95.00	1352.72	-29.38	-41.73	9.06	.43	51.04	234.85	
1	1492.00	2.60	222.20	138.00	1490.60	-33.80	-45.24	11.59	.44	56.48	233.24	
	1781.00	5.60	268.90	289.00	1778.90	-38.93	-63.75	8.44	1.47	74.70	238.59	
	1841.00	6.30	280.90	60.00	1838.58	-38.36	-69.91	5.33	2.37	79.75	241.24	
	1903.00	6.60	273.10	62.00	1900.19	-37.53	-76.81	1.66	1.49	85.49	243.96	
	1936.00	7.10	271.00	33.00	1932.95	-37.39	-80.74	- 12	1.69	88.98	245.15	
	.000.00	, . 10	2	55.00		2.100			.,			



	sured	Incl	Drift	Course	True			Vertical	Dogleg	CLOS	
	epth =T	Angle Deg	Direction Deg	Length FT	Vertical Depth	N-S FT	E-W FT	Section FT	Severity Deg/100	Distance FT	Direction Deg
							· ·				
1968		7.90	270.20	32.00	1964.68	-37.35	-84.92	-1.92	2.52	92.77	246.26
1999		8.60	266.20	31.00	1995.36	-37.49	-89.36	-3.66	2.92 6.03	96.91	247.24
2031		9.90	257.30	32.00	2026.94	-38.26	-94.43	-5.10		101.89	247.95
2063		10.50	246.20	32.00	2058.44	-40.04	-99.79	-5.74	6.41	107.52	248.14
2095	5.00	9.80	234.60	32.00	2089.94	-42.79	-104.67	-5.30	6.74	113.08	247.76
2127	7 00	9.00	221.60	32.00	2121.51	-46.24	-108.56	-3.81	7.07	118.00	246.93
2158		9.20	214.20	31.00	2152.12	-50.11	-111.56	-1.57	3.83	122.30	245.81
2190		9.60	215.80	32.00	2183.69	-54.39	-114.56	1.04	1.49	126.81	244.60
2222		9.60	218.90	32.00	2215.25	-58.63	-117.79	3.53	1.62	131.58	243.54
2253		9.70	218.00	31.00	2245.81	-62.70	-121.03	5.85	.58	136.30	242.61
			2.0.00								
2283		9.00	213.10	30.00	2275.41	-66.65	-123.86	8.25	3.53	140.66	241.71
2316	5.00	8.00	205.60	33.00	2308.05	-70.89	-126.27	11.07	4.52	144.80	240.69
2348		7.50	197.10	32.00	2339.76	-74.89	-127.84	14.04	3.90	148.16	239.64
2380	0.00	6.20	184.30	32.00	2371.53	-78.61	-128.59	17.10	6.24	150.71	238.56
2412	2.00	5.00	174.00	32.00	2403.38	-81.72	-128.57	19.93	4.88	152.34	237.56
2441		3.90	157.40	29.00	2432.29	-83.89	-128.06	22.11	5.80	153.09	236.77
2474	1.00	3.40	141.00	33.00	2465.22	-85.69	-127.01	24.18	3.49	153.21	235.99
2570	0.00	3.80	136.60	96.00	2561.03	-90.21	-123.03	29.96	.51	152.56	233.75
2633	3.00	4.70	147.10	63.00	2623.86	-93.89	-120.20	34.49	1.88	152.52	232.00
2665	5.00	4.90	148.60	32.00	2655.75	-96.16	-118.77	37.15	.74	152.82	231.01
2696	5.00	4.70	146.30	31.00	2686.64	-98.35	-117.38	39.72	.90	153.13	230.04
2728	3.00	4.90	145.50	32.00	2718.53	-100.56	-115.88	42.37	.66	153.43	229.05
2760	0.00	4.80	138.20	32.00	2750.41	-102.69	-114.21	44.99	1.95	153.59	228.04
2792	2.00	4.30	129.20	32.00	2782.31	-104.45	-112.39	47.35	2.72	153.43	227.10
2823	3.00	4.20	116.20	31.00	2813.23	-105.68	-110.47	49.28	3.12	152.88	226.27
2855	5.00	4.50	112.40	32.00	2845.14	-106.68	-108.26	51.12	1.30	151.99	225.42
2887	7.00	4.70	114.00	32.00	2877.03	-107.69	-105.90	53.03	.74	151.03	224.52
2919	9.00	5.00	115.20	32.00	2908.92	-108.82	-103.44	55.09	.99	150.14	223.55
2950		5.30	112.50	31.00	2939.79	-109.94	-100.89	57.18	1.24	149.22	222.54
2982	2.00	5.50	106.10	32.00	2971.65	-110.93	-98.06	59.27	1.98	148.05	221.47
0040		4.00	00.40	24.00	2000 52	444.04	05.00	60.00	E 40	146 F0	220 57
3013		4.80	90.10	31.00	3002.53	-111.34	-95.33	60.80	5.13	146.58	220.57
3044		4.20	80.60	31.00	3033.43	-111.16	-92.91	61.65	3.08	144.88	219.89
3076		3.70	82.30	32.00	3065.36	-110.83	-90.73	62.27	1.60	143.24	219.31
3108		2.60	116.40	32.00	3097.31	-111.02	-89.06	63.14	6.64	142.32	218.74
3139	3.00	2.90	131.80	31.00	3128.28	-111.85	-87.85	64.41	2.56	142.22	218.15
3202	2 00	3.90	138.20	63.00	3191.16	-114.51	-85.23	67.93	1.70	142.75	216.66
3265		2.70	193.60	63.00	3254.07	-117.55	-84.15	71.14	5.15	144.57	215.60
3344		5.40	221.10	79.00	3332.88	-122.16	-87.03	74.11	4.12	149.99	215.47
3375		6.30	227.10	31.00	3363.71	-124.42	-89.24	75.22	3.51	153.11	215.65
3406		6.20	223.00	31.00	3394.53	-126.80	-91.63	76.38	1.48	156.44	215.85
J400		0.20	220.00	51.00	JUUUU	,20.00	51.00	. 0.00	1. 10	.55.17	



Measured	Incl	Drift	Course	True			Vertical	Dogleg	CLOS	1105
Depth	Angle	Direction	Length	Vertical	N-S	E-W	Section	Severity	Distance	Direction
FT	Deg	Direction	FT	Depth	FT	FT	FT	Deg/100	FT	Deg
			<del></del>	•						
3437.00	5.20	210.90	31.00	3425.38	-129.23	-93.49	77.80	5.03	159.50	215.88
3469.00	4.30	200.80	32.00	3457.27	-131.60	-94.66	79.45	3.83	162.10	215.73
3501.00	3.90	198.30	32.00	3489.19	-133.75	-95.43	81.08	1.37	164.30	215.51
3532.00	3.60	190.00	31.00	3520.12	-135.71	-95.93	82.64	2.00	166.19	215.25
3564.00	2.80	175.40	32.00	3552.07	-137.48	-96.04	84.20	3.55	167.70	214.94
3595.00	2.10	152.70	31.00	3583.04	-138.74	<b>-</b> 95.72	85.48	3.82	168.55	214.60
3627.00	1.70	133.90	32.00	3615.02	-139.59	-95.11	86.51	2.30	168.91	214.27
3659.00	1.80	104.50	32.00	3647.01	-140.04	-94.28	87.27	2.79	168.82	213.95
3687.00	2.20	105.40	28.00	3674.99	-140.30	-93.33	87.90	_1.43	168.51	213.63
3719.00	2.60	105.40	32.00	3706.96	-140.65	-92.04	88.76	1.25	168.09	213.20
3750.00	3.00	109.70	31.00	3737.93	-141.11	-90.60	89.79	1.46	167.69	212.70
3781.00	3.30	107.10	31.00	3768.88	-141.65	-88.98	90.96	1.07	167.28	212.14
3812.00	3.90	100.00	31.00	3799.82	-142.09	-87.09	92.16	2.41	166.66	211.51
3843.00	5.10	82.20	31.00	3830.73	-142.09	-84.69	93.17	5.90	165.41	210.80
3875.00	6.70	70.30	32.00	3862.56	-141.27	-81.52	93.75	6.27	163.10	209.99
307 3.00	0.70	10.00	02.00	0002.00	111.21	01.02	00.70	0.2.	700.10	200.00
3906.00	6.40	70.30	31.00	3893.35	-140.08	-78.19	94.08	.97	160.42	209.17
3968.00	5.40	62.00	62.00	3955.03	-137.54	-72.36	94.23	2.12	155.42	207.75
4000.00	5.28	58.48	32.00	3986.89	-136.06	-69.78	93.98	1.09	152.91	207.15
4031.00	4.40	44.40	31.00	4017.78	-134.47	-67.73	93.40	4.75	150.56	206.73
4062.00	4.40	35.80	31.00	4048.69	-132.68	-66.22	92.41	2.13	148.28	206.73
4002.00	4.50	55.00	31.00	4040.03	-102.00	-00.22	32.41	2.10	170.20	200.02
4093.00	3.50	32.80	31.00	4079.62	-130.94	-65.03	91.34	2.66	146.20	206.41
4124.00	2.00	8.10	31.00	4110.58	-129.61	-64.44	90.38	6.06	144.74	206.44
4155.00	2.00	350.50	31.00	4141.56	-128.54	-64.45	89.41	1.97	143.79	206.63
4217.00	1.30	330.50	62.00	4203.54	-126.86	-64.98	87.66	1.45	142.53	207.12
		149.50	92.00	4205.54	-120.00 -127.20	-64.76	88.06	3.37	142.73	206.98
4309.00	1.80	149.50	92.00	4293.32	-127.20	-04.70	00.00	5.57	142.75	200.30
4400.00	2.10	118.70	91.00	4386.47	-129.23	-62.57	90.82	1.18	143.58	205.84
4665.00	6.30	335.30	265.00	4651.02	-129.23	-64.39	80.18	3.05	134.72	208.55
							55.22	2.76	121.91	218.14
4832.00	10.90	333.40	167.00	4816.10	-95.88	-75.29				220.13
4856.00	11.20	333.30	24.00	4839.66	-91.77	-77.36	50.62	1.25	120.02	
4888.00	11.20	333.70	32.00	4871.05	-86.20	-80.13	44.41	.24	117.69	222.91
4020.00	40.00	224 70	22.00	4902.46	QA 74	-82.79	38.30	1.38	115.62	225.73
4920.00	10.80	334.70	32.00	4902.46	-80.71 -75.52	-85.21	32.57	1.01	113.86	228.45
4951.00	10.50	335.20	31.00			-85.21 -87.70	32.57 26.80	.96	112.40	231.28
4983.00	10.30	333.90	32.00	4964.40	-70.30					231.26
5014.00	10.00	333.10	31.00	4994.91	-65.41	-90.13	21.34	1.07	111.37	
5046.00	9.40	334.90	32.00	5026.46	-60.57	-92.50	15.95	2.10	110.56	236.78
E070 00	0.40	240.20	22.00	E0E0 03	5E 7A	04.40	10.73	2.76	109.70	239.46
5078.00	9.40	340.30	32.00	5058.03	-55.74	-94.49 06.05		2.76 3.18	109.70	242.21
5110.00	9.90	345.60	32.00	5089.58	-50.62	-96.05	5.42			244.84
5141.00	8.90	346.00	31.00	5120.16	-45.71	-97.30	.45	3.23	107.50	
5173.00	7.60	347.60	32.00	5151.83	-41.24	-98.35	-4.05 -7.70	4.12	106.65	247.25
5205.00	5.70	338.50	32.00	5183.61	-37.69	-99.39	-7.70	6.77	106.29	249.23

Page 3
Sidetrack File: C:\SURVEY\WOLVER~1\17-2.SVY

	Measured Depth	incl Angle	Drift Direction	Course Length	True Vertical	N-S	E-W	Vertical Section	Dogleg Severity	C L O S Distance	URE Direction
_	FT	Deg	Deg	FT	Depth	FT	FT	FT	Deg/100	FT	Deg
	5236.00	5.00	344.20	31.00	5214.48	-34.96	-100.32	-10.57	2.83	106.24	250.79
	5268.00	3.70	355.90	32.00	5246.38	-32.59	-100.77	-12.91	4.90	105.91	252.08
	5300.00	1.00	10.40	32.00	5278.35	-31.28	-100.80	-14.11	8.57	105.54	252.76
	5330.00	1.80	182.80	30.00	5308.35	-31.50	-100.77	-13.90	9.31	105.58	252.64
	5363.00	3.60	190.60	33.00	5341.31	-33.03	-100.99	-12.60	5.55	106.25	251.89
	5395.00	4.40	195.60	32.00	5373.23	-35.20	-101.50	-10.85	2.72	107.43	250.87
	5435.00	4.00	200.00	40.00	5413.13	-37.99	-102.39	-8.70	1.28	109.21	249.64
	5470.00	3.60	203.60	35.00	5448.05	-40.15	-103.25	-7.10	1.33	110.78	248.75
	5501.00	2.80	197.70	31.00	5479.00	-41.76	-103.87	-5.90	2.79	111.95	248.10
	5533.00	1.70	183.70	32.00	5510.98	-42.98	-104.14	-4.91	3.82	112.66	247.57
	5563.00	1.10	171.80	30.00	5540.97	-43.71	-104.12	-4.24	2.21	112.93	247.23
	5576.00	1.20	211.50	13.00	5553.97	-43.95	-104.18	-4.05	6.05	113.07	247.13
	5593.00	1.20	273.10	17.00	5570.96	-44.09	-104.45	-4.03	7.23	113.37	247.11
	5610.00	1.50	296.10	17.00	5587.96	-43.98	-104.83	-4.29	3.61	113.68	247.24
	5627.00	1.90	314.60	17.00	5604.95	-43.69	-105.23	-4.73	3.97	113.93	247.45
	5653.00	2.40	330.80	26.00	5630.93	-42.91	-105.80	-5.68	3.01	114.17	247.92
	5685.00	2.60	335.70	32.00	5662.90	-41.66	-106.43	-7.07	.91	114.29	248.62
	5717.00	2.90	337.50	32.00	5694.86	-40.25	-107.03	-8.60	.98	114.35	249.39
	5749.00	2.40	318.60	32.00	5726.83	-39.00	-107.79	-10.05	3.12	114.63	250.11
	5782.00	2.40	315.00	33.00	5759.80	-37.99	-108.73	-11.37	.46	115.18	250.74
	5814.00	2.90	315.70	32.00	5791.77	-36.94	-109.77	-12.76	1.57	115.82	251.40
	5846.00	3.60	319.70	32.00	5823.72	-35.60	-110.99	-14.49	2.30	116.55	252.22
	5878.00	4.20	321.30	32.00	5855.64	-33.92	-112.37	-16.60	1.91	117.38	253.21
	5910.00	4.50	321.10	32.00	5887.55	-32.02	-113.89	-18.95	.94	118.31	254.30
	5942.00	4.90	321.60	32.00	5919.44	-29.98	-115.53	-21.50	1.26	119.35	255.45
	5974.00	5.10	323.60	32.00	5951.32	-27.76	-117.22	-24.23	.83	120.46	256.68
	6006.00	5.20	326.50	32.00	5983.19	-25.41	-118.86	-27.05	.87	121.55	257.94
	6037.00	4.60	332.80	31.00	6014.08	-23.13	-120.21	-29.68	2.60	122.41	259.11
	6069.00	4.70	337.80	32.00	6045.97	-20.77	-121.29	-32.28	1.30	123.06	260.28
	6100.00	5.10	339.00	31.00	6076.86	-18.31	-122.26	-34.92	1.33	123.63	261.48
	6132.00	5.70	338.00	32.00	6108.72	-15.51	-123.37	-37.93	1.90	124.34	262.83
	6163.00	6.10	334.30	31.00	6139.55	-12.60	-124.66	-41.11	1.78	125.29	264.23
	6195.00	6.20	329.10	32.00	6171.37	-9.58	-126.28	-44.53	1.77	126.65	265.66
	6227.00	5.80	322.60	32.00	6203.19	-6.82	-128.15	-47.83	2.46	128.33	266.96
	6258.00	5.40	319.20	31.00	6234.05	-4.47	-130.06	-50.76	1.68	130.13	268.03
	6290.00	4.90	315.00	32.00	6265.92	-2.36	-132.01	-53.49	1.96	132.03	268.98
	6322.00	4.70	309.80	32.00	6297.80	56	-133.98	-55.96	1.50	133.98	269.76
	6386.00	4.90	299.70	64.00	6361.58	2.48	-138.37	-60.56	1.36	138.39	271.03
	6449.00	4.30	293.70	63.00	6424.38	4.76	-142.87	-64.53	1.22	142.95	271.91
	6512.00	5.00	282.50	63.00	6487.17	6.30	-147.71	-67.97	1.81	147.85	272.44

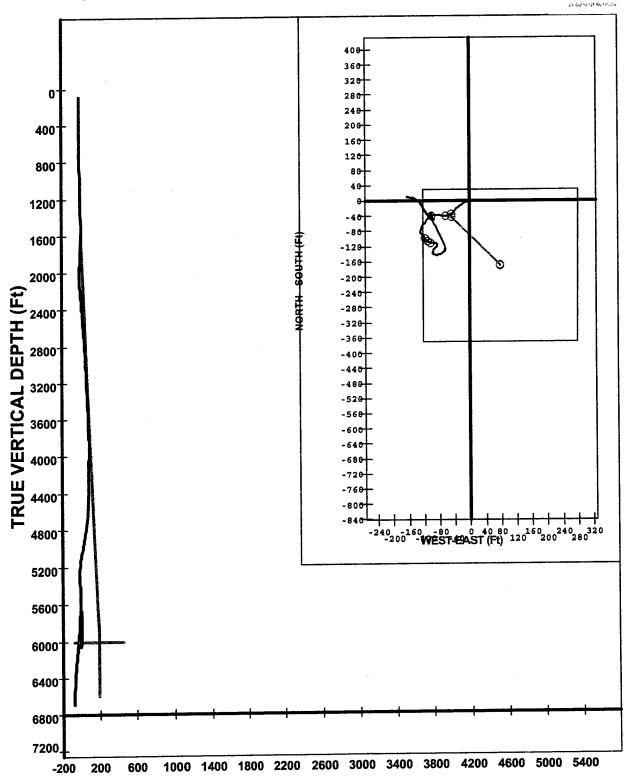
Page 4
Sidetrack File: C:\SURVEY\WOLVER~1\17-2.SVY



Measured Depth FT	incl Angle Deg	Drift Direction Deg	Course Length FT	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	C L O S Distance FT	
6576.00	4.70	288.70	64.00	6550.94	7.75	-152.92	-71.47	.94	153.12	272.90
6672.00	5.40	281.80	96.00	6646.57	9.93	-161.07	-76.88	.96	161.37	273.53
6710.00	5.70	280.40	38.00	6684.39	10.64	-164.67	-79.05	.87	165.02	273.70
Projecti	on to Bit									
6750.00	6.02	278.93	40.00	6724.18	11.32	-168.70	-81.36	.87	169.08	273.84

Company: Wolverine Gas And Oil of Utah LLC Lease/Well: Wolverine Federal # 17-2 Location: Sec 17,T23S,R1W State/Country: Ut,Seiver





∇-- Control Strait Orginal △- Control Strait O- Sidetrack **VERTICAL SECTION (Ft) @ 155.08°** 

	Phone: (3	07) 682-0626		REE	BEL T	EST	INC	à		F.O. Box 296 Gliene, WY 82717-0296
Ope	raitor	Wolverine Ga	as & Oil Co.					Ţ	icket #	2306
Add	rees	One Riverfron	nt Plaza, 55 Ca							
		Grand Rapid	<del></del>	03-2616		É-Mat			Fax	
Wel	I Name & No.	Wolverine	Fed. 17-2	·		DST No.	1	Date	7/29/04	Net Pt. Pay
		CDD.				3/4		Mud Typ	LC LC	ow solids / Salt Polymer
	tractor	10	<del></del>	Surface Ch Bottom Cho		3/4		Weight,	~ <u>, </u>	9.9
rng Spo	No	SE SV	٧	Hole Size _		6 1/4		•		36
		4 ***		Rat Hole Si		6 1/4		Water La		11.8
Two		23 \$		D.P. Size 8	w. 31/	2 IF 13.	30	Resistivit	lv	1.5 @ 93 Deg.
nng		1 W		Wt. Pipe St	3 1/	2 IF		Ppm. Na	a	2900
Fiel	d b			I,D, of D.C.				Bottom		•
Cou	inty	Sevie		Length of D	I.C. above Tool	803	·		mperature	158 Deg.
Ste	<b></b>	Ut.		Total Depth		5860	Decker			
	. Elevation	Top Zo	ne	Type Test		tional ( csg. 340 586			11:40	a.m <sub>Uneet @</sub> 3:30 p.m.
Fort	hadon	100 20		Test Interve				1001 Ope	ned @	Tarri Unask & Groop parts
Blov						Top Pikrat _		5045	Middle Pkr e	I
		i @ 11:40 a.m. w nin., 13 oz. in 5 n				Bottom Pier s		5340	4th Pier at	
-		@ 11:59 w/ no b		/ // III.	15 11101.	Length of Te			20'	
		@ 12:30 w/ 7" t		n., 4" in 5 n	nin., 2" in 10	Test Interval: Below Stradd			Collars	
	nin., 1" in '	15 min., 1/2" in 20	0 min., 1/2° in 2	25 min., su	face bubbles	Was tool plus		NO	Coners	nkunnert? NO
İ		weak surface but		, 45, 50, 55	, & 60 min.	Did bottom o	-	3/		w bottom pler
	Shut tool	@ 1:30 p.m. w/ i	no blow.			יויטונטם בייק	acha nord			
						Flow No. 1 _		15	Shurin No. 1	30
		P	ULL LOOSE @	3:30 p.m.		Flow No. 2 _		60	Shut-in No. 2	120
						Flow No. 3 _			Shut in No. 5	<u> </u>
			TIGHT HOLE			TIME	IMS/I	PSI	CHOKE	M CUBIC FEET/DAY
							<del> </del>			COLLAND WITCHTON BEACH SECTION
	arks:						<del> </del>			
	_	7:15 a.m. on 7/29								
	stobbea @	9:30 p.m. on 7/2	19104							
N	like,						1			
F	lease sen	d 4 copies of test	to Wolverine-	Attn. John	Vrona and 1					
		e Hash @ EXAC	T Engineering	inc. 415 S.	Boston Ste.	Pressure in S	iampier: _		18	O PSIG
73	4 in Tulsa	OK. 74103				Total Volume	of Semple	r:	268	cc.
Cuel	nion	NA NA		Amount	n.	Total Volume	of Semple	:	230	
Toba	Fuid Recov		Ft. Consis	my or	11 Bbls.	Oil:			185	50ec.
	4600 pr		ulsified Mud C	Ut OH		Waiter;	~~		45	
					***************************************	Mud:				3
_	P.			···· /		Gee: Other:		Grind-c		0%oil, 19%gas
Testi		reverse circulated?		WAS		Sample R.W.		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	lly for accura	
	Desiry	1000,000				Gravity:			42 @ 60	<del></del>
	Top Sample	R.W. Oil- 19	6mud, 6%h2o,	60%oil, 33	%gas, 42 Grav	Gas/Oli Ratio			17.	2
	Middle San	Dec 11.71.	6mud,8%h2o,6			Make Up Wa	ter R.W.:	7	@ 80 Deg.	650 Ppm Nacl
	Bottom San	nple R.W1.5	@ 100 Deg. :	2750 Ppm	Nact					
_				ALC.		744		T		
-	Cap. 10,0	Ma No. 3010		ТуреАК Сер52	00 to 53		ock 5308	Type	No	Clock
١	traside X	Outside	Hrs. 24	Inaide	Outside X		18	Cap		No
ı	Press.	Field	Corrected	Press.	Field		cted	Press.	Fleid	
g	H.	2762		RH .	2810			IH		
7 T	FH .	2727		FH	2785			FH	<del> -</del>	
	#-1 FF-1	515 1939	<del> </del>	(F-1 FF-1	809 1725	-		FF-1	+	
Œ 1*	IF-2	1753		1F-2	1840			IF-2		
ğΙ	FF-2	2171		FF-2	2221			FF-2		
	IF-3		<u> </u>	1F-3		-		IF-3		
•	FF-3 SIP-1	2269	<del> </del>	FF-3 SIP-1	2285	┪		FF-3	-	
- 1	SIP-2	2397		SIP-2	2413	+		SIP-1	+	
- 1	SIP-3			SIP-3				SIP-3	<u> </u>	
			RESERVOIR ANA	LY8/57	?					***************************************
		Bob Hammond	ı		. 5				Steve	Hash
_	···-·	Tedler			No. Final Cop	<del>/01</del>	WELL	OWNERS RE		E (Please print legibly)



Gillette WY Ph (307) 682-9626



# REBEL TESTING, INC.

Technical Services (928) 505-8389

	9626							8389
Contractor	CDDT	Surface Choke	3/4"	Mud Type	Low So	olids/P	olyme	er
Rig No.	10	Bottom Choke	3/4"	Weight	9.9		-	
Spot	SE/SW	Hole Size	6 1/4"	Viscosity	36			
Sec	17	Core Hole Size		1 -	11.8			
Twp	23 S	DP Size & Wt	3 1/2" 13.30	Filter Cake				
Rng	1 W	Wt Pipe		RW	1.5	<b>@</b>	93	Deg F
Field	• ••	ID of DC			2,871	-		Ppm
	Coving	t	902'	B.H.T.	158.4			r bess
County	Sevier	Length of DC	803'	<b>5.</b> ⊓.1.	150.4			Dog E
State	Utah	Total Depth	5860'	0. 5	<u>.</u>			Deg F
Elevation		Type of Test	Csg Packer Test	Co. Rep.	Steve I			
Formation	Top Zone	Interval	5340'- 5860'	Tester	Bob Ha	mmor	nd	
Pipe recovery:		<del></del>		Pressure in Sa	ampler	180		psig
				Volume of Sai	mpler	2650		œ
Reverse circ				Volume of Sai	mple	2300		oc
4600' Gas &	emulsified, mud cut oil = $31.0$	) bbi.		Oil: 185	-			œ
				Water: 0				cc
	it: 60% oil, 33% gas, 6% w			Mud: 450	)			ec
•	out: 60% oil, 30% gas, 8% w		avity 42.0 deg API)	Gas: 0.1				cu ft
Bottom rw:	1.5 @ 100 deg f/2,673 p	pm NaCl.		Other: 0	••			
Surface blow:				-	10/ All /	100/	ne 46	& hasia
	Began with a 6" blow, increase	ad to bottom of h	icket in 1 min 140 oz in	Grind out: 80	270 OII,	1376 ga	a5, 17	o nasic
	•			sediment				
	eased to 13.0 oz în 5 min, 8.0			Gas/Oil Ratio 17.2/1 cuft./bbl.				
	Began with a 7" blow, decreas		Gravity	42.0	,	API @	60 Deg F	
-	, 1/2" in 20 min, surface bubbl	es ii su miri, we	an surface doddies in 33					
min and rem	an red.			<b></b>				
				Gauge Type	Sunada	Electr	onic	
				No. 301			10000	) psi
				Depth 532				fL
				Inside X	-		Outside	
								-
	Downhole Pres	sure Chart						
				Initial Hydrostati		2769		
				Final Hydrostatio		272		
	_			Initial Flow 1	В	469		
	ALA.	K		Final Flow 1	C	1707		
	<b>₽</b> **	J-	M	Initial Flow 2 Final Flow 2	E	1752 2172	_	
		1: 1-	(H)			2174	-	
	<b>J</b>	G   1 -	J <b>II</b> }	Initial Flow 3	H			
	D		يالر	Initial Flow 3 Final Flow 3	1			
1	J P F			Final Flow 3	1			
		G   M		Final Flow 3 Shut-in 1	i D	227		
_	F			Final Flow 3 Shut-in 1 Shut-in 2	I D G	227 <sup>2</sup>		
أن	F			Final Flow 3 Shut-in 1	i D			
1		——]6 . M		Final Flow 3 Shut-in 1 Shut-in 2	I D G			
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	F			Final Flow 3 Shut-in 1 Shut-in 2 Shut-in 3 Opened Tool @	I D G J 11:4	239	on 07 Correc	ted
	F			Final Flow 3 Shut-in 1 Shut-in 2 Shut-in 3 Opened Tool @	I D G J 11:4 Rep 15	2398 40 hrs	on 07 Correc 18	bets min
	F			Final Flow 3 Shut-in 1 Shut-in 2 Shut-in 3 Opened Tool @ Flow 1 Shut-in 1	I D G J 11:2 Rep 15 30	2398 40 hrs	on 07 Correc 18 32	bets min min
	E C			Final Flow 3 Shut-in 1 Shut-in 2 Shut-in 3 Opened Tool @ Flow 1 Shut-in 1 Flow 2	1 D G J 11:4 Rep 15 30 60	2398 40 hrs orted	on 07 Correct 18 32 61	bets min min min
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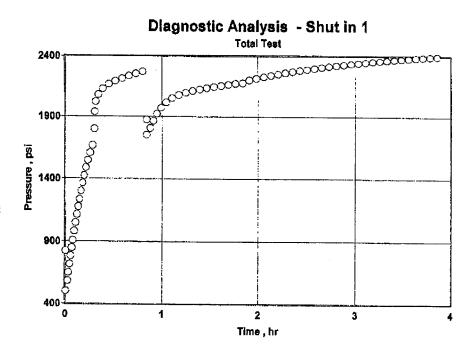
LEASE NAME & NO

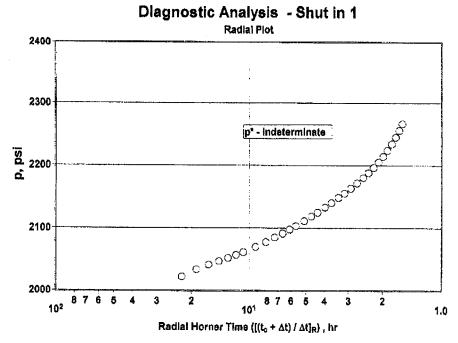
COMPANY

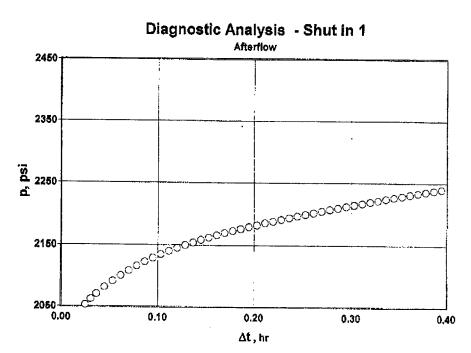
WOLVERINE GAS & OIL CO. WOLVERINE FEDERAL #17-2

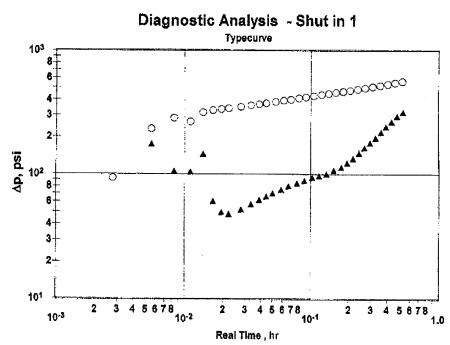
SEVIER UTAH

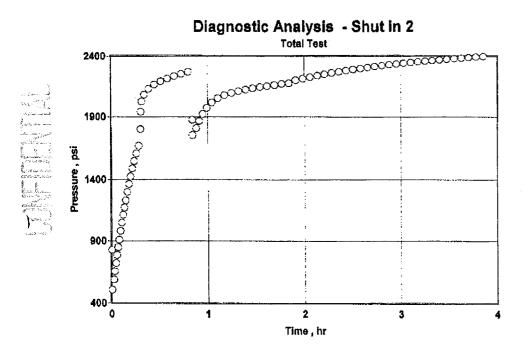
DATE TICKET#

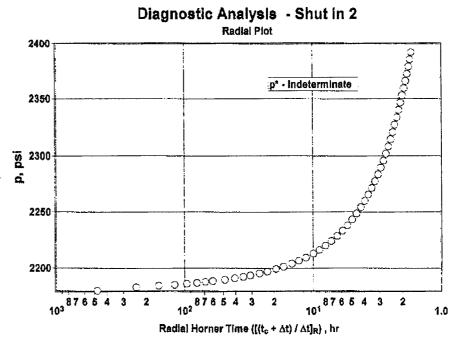


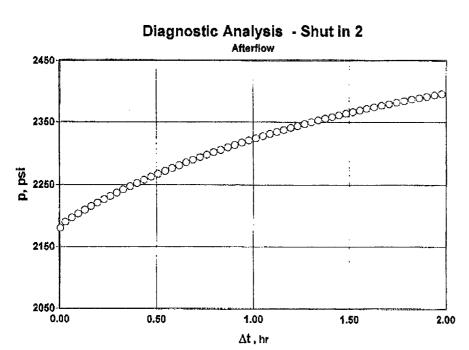


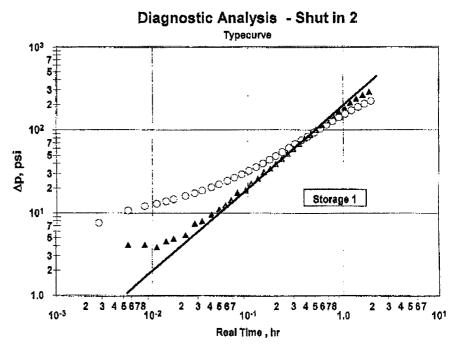




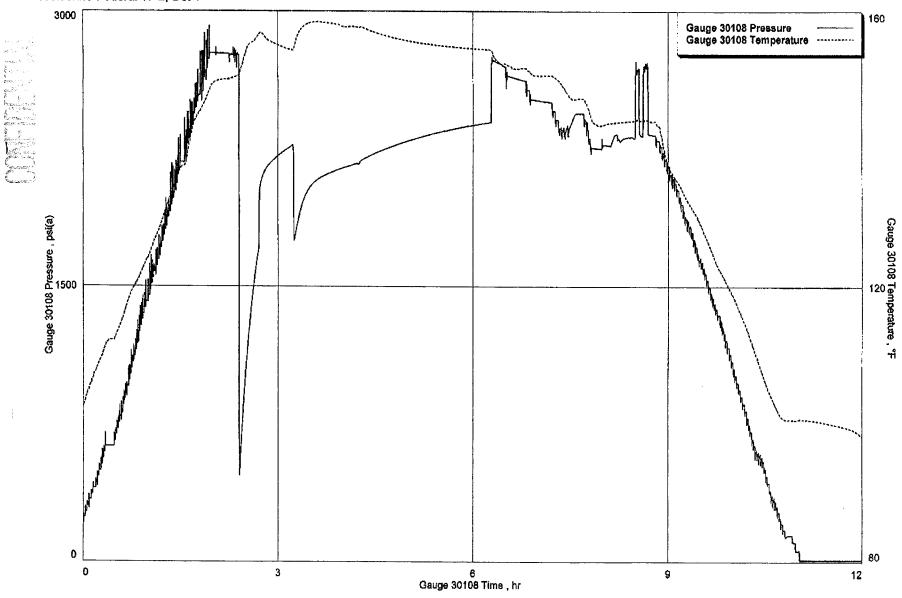








Wolverine Gas & Oil Co Wolverine Federal 17-2, Dst 1







FARMINGTON, NEW MEXICO/GRAND JUNCTION, COLORADO

P. O. Box 1198 Farmington, New Mexico 87499 (505) 325-1731 Fax (505) 325-1148 2332 Interstate Ave., Ste. A Grand Junction, CO 81505 (970) 241-0403 Fax (970) 241-7634

October 29, 2004

# **WOLVERINE GAS & OIL OF UTAH, LLC**

One Riverfront Plaza 55 Campau Grand Rapids, MI 49503-2616

Attention: Mr. Gary Bleeker

Subject:

Bottom Hole Sampling and Wireline

Wolverine Federal No. 17-2

Navajo Formation Sevier County, Utah File No. 2-52792-BH\$&WL

### Dear Sir:

Attached hereto are the results of the Bottom Hole Sampling and Wireline Operations conducted on the above captioned wells on October 27, 2004.

The data presented is in tabular and graphical form.

It has been out pleasure to perform these services for you. If we can be of further assistance, please call us at any time.

Respectfully submitted,

Neil Tefteller

TEFTELLER, INC.

NT/mdt

Cc: Mr. Steve Hash; Exact Engineering, Inc.

Form RF1-35

# CORE LABORATORIES, INC. Petroleum Reservoir Engineering DALLAS, TEXAS

		Pageof
,		File
Company WOLVERINE VILEGAS A LITHIU. LLC	_ Date Sa	mpled 10-27-04
Well WOLVERINE FEDERAL 17-Z	_ County_	SEVIER
Field	_ State	Cl TA14
FORMATION CHA	RACTER	
Formation Name		LOWERNAUA (O
Date First Well Completed		19200
Original Reservoir Pressure		Z63z PSIG @ 6550 Ft.
Original Produced Gas Liquid Ratio		
Production Rate		ZO BBU/HR. Bbls./Day
Separator Pressure and Temperature		PSIG° F.
Liquid Gravity at 60° F.		42 ° API
Datum		Ft. Subsea
WELL CHARA	CTERISTI	CS
Elevation	0.2	5847 KB
Total Depth		4624 PBroFt.
Completion Depth		4378'-88' Ft.
Tubing Size and Depth		Z 3/8 In. to 6356 Ft.
Open Flow Potential		MMSCF/Day
Last Reservoir Pressurc		
Date Date		10-77 10.7604
Reservoir Temperature		188 F.@ 6350 Ft.
Status of Well		SHUTIN ZY HRS
Pressure Gauge		- ANERADA
SAMPLING CO	NDITION	S
Flowing Tubing Pressure		- 544 PSIG
Flowing Bottom Hole Pressure		PSIG
Primary Separator Pressure Primary Separator Temperature		PSIG
Secondary Separator Temperature		° F,
Secondary Separator Temperature		PSIG
Field Stock Liquid Gravity		
Primary Separator Gas Production Rate		° API @ 60° F, MSCF/Day
Pressure Base	PSIA	DISCF/Day
Temperature Base	° F.	
Compressibility Factor (F <sub>nv</sub> )	I'•	
Gas Gravity (Laboratory)		
Gas Gravity Factor (F <sub>e</sub> )		
Liquid Production Rate @ 60° F.		Bbls./Day
rimary Separator Gas/Liquid Ratio		O SCF/Bbl.
or		Bbls./MMSCF
ore Laboratories, Inc., Engineer		Dos, mindol
EMARKS:		

BHSAMPLES AFTER BREAKDOWN WELL PRODUCED APPRO, 230-300 BBSE, SHUT ID 24 HAR BUSORE SAMPLING. SHAKE COUT Z-4/2-

TEFTI LLER, INC

BOTTOM HOLE PRESSURE SURVEYS

MIDLA.ID, TEXAS FARMINGTON, NEW MEXICO

GRAND JUNCTION, COLORADO

# FIELD PV DATA

Company WOLVERINE 08	G CO. OF UTAH W	ell WOLVERINE F	ED. #17-2	
Date 10-27-04		emarks 0-GOR NO E		
BHS No. 1 BOTTO Opening Pressure 350 Atmospheric Temperature	LE NO.	BHS NO. 2	BOTTL	E NO.
Atmospheric Temperature	62 POF	Atmospheric	Temperature	63
PUMP READING NO. TURNS	PRESSURE 350	PUMP READING	NO. TURNS	PRESSURE
1 4 1 5	400	1	5	37 <u>5</u> 440
1 6 7	420 450	1	6 7	550 690
1 8	500	1	<u>8</u> 9	810 1000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	710 900 1140	1	10 11 12	1220 1460 1720
1 13 14	1380 1620	1	13	2000 2250
1 15 1 16	1900 2140			

Ø 004/005

11/05/2004 16:46 FAX 918 599 9401 EXACT Engineering Inc

Company: WOLVERINE OIL & GAS CO. OF UTAH

Well: WOLVERINE FEDERAL # 17-2 County: SEVIER Field: NAVAJO FORMATIUN State: UTAH

Engineer: NEIL TEFTELLER Date: 10/27/2004

Gauge Type: AMERADA Well Type:

Gauge Range: 0-3000 Test Type: GRADIENT Gauge Depth: 6350 ft Status: SHUT IN Serial No.: 44537 File Name: 52792

Tubing: 2-3/8" TO 6366' Packer Depth 6356 ft

Tubing: ΤÒ

Casing: 4-1/2" TO Oil Level Perfs.: 6378'-6388' H2O Level Elevation: 5847' Zero:

Shut-in Time 24 hrs

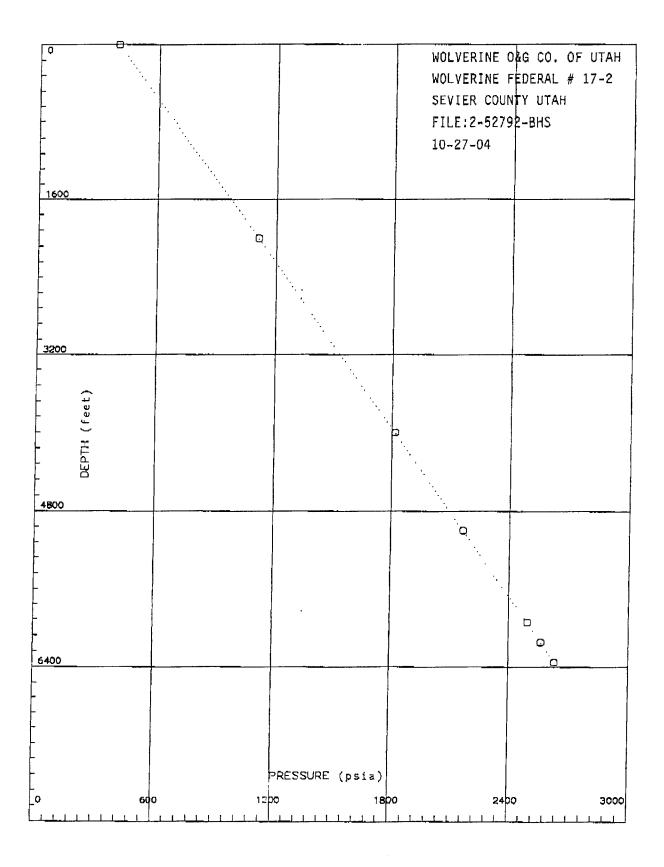
Shut-in BHP 2632 @ 6350 ft Shut-in BHT 188 F @ 6350 ft

Shut-in WHP Shut-in WHT 394 0 F

[ Tefteller Incorporated ] . .

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	394.00	•
2	2000	2000	1109.00	0.357
3	4000	4000	1814.00	0.352
4	5000	5000	2162.00	0.348
5	5950	5950	2494.00	0.349
6	6150	6150	2563.00	0.345
7	6350	6350	2632.00	0.345

FLUID LEVEL @ SURFACE





# WOLVERINE GAS AND OIL COMPANY of Utah, I.I.C

linerry Exploration in Partnership with the Environment

January 31, 2(X)5

State of Utah Division of Oil, Gas & Mining 1594 West North Temple Suite 1210 Salt Lake City, UT 84114-5801

Via Fax (801) 359-3940

Re:

Approved APD

Wolverine Federal 17-2

TO

To Whom It May Concern:

Wolverine Gas and Oil Corporation of Utah, as operator of the captioned well (API Nos. 43-041-30031), hereby requests copies of the approved Applications to Drill with any conditions for approval for said wells. Please fax them to my attention at (616) 458-0869.

If you have any questions or concerns, please feel free to contact me.

Hew Boud of

Helenc Bardolph

3 ENT 4-8-05 USD RECEIVED
APR 0 / 2005

DIV. OF OIL, GAS & MINING



235 /W Sec. 17

#### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

	FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007
1	anna Carial Ma

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an

5.	Lease Serial No.	
	UTU-73528	
5.	If Indian, Allottee or Tribe Name	

abandoned we	ell. Use Form 3160-3 (A	APD) for such pro	posais.				
SUBMIT IN TRIPLICATE- Other instructions on reverse side.					7. If Unit or CA/Agreement, Name and/or No. Wolverine Fed Exploration Unit		
1. Type of Well Oil Well	8. Well Name and No. Wolverine Federal #17-2						
2. Name of Operator Wolverine Ga	as & Oil Co of Utah, LLC			9. API Wel			
3a. Address One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI  3b. Phone No. (include area code) 616-458-1150					43-041-30031  10. Field and Pool, or Exploratory Area Exploratory  11. County or Parish, State Sevier Co, UT		
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  SHL: 830' FSL & 1901' FWL  BHL: 841' FSL & 1732' FWL (TD)							
12. CHECK AF	PROPRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, R	EPORT, OR	OTHER DATA		
TYPE OF SUBMISSION		TYI	PE OF ACTION				
✓ Notice of Intent  Subsequent Report  Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Stan Reclamation Recomplete Temporarily Ab	•	Water Shut-Off Well Integrity Other		
12 Describe Proposed or Complete	ed Operation (clearly state all pertin	nent details, including esti	mated starting date of ar	y proposed wo	rk and approximate duration thereof.		

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Disposal of Produced Water - Interim Proposal

Produced water will be disposed of by one of the following methods:

- 1. used as drilling fluid for Wolverine Federal wells 17-3,17-4,17-5,8-1 and & KMR 17-6(8-1), KMR 17-7 at SENW Sec 17, T23S, R1W and/or for drilling fluid for Wolverine Federal wells 18-1, 19-1 & 20-1 to be drilled at SESW Sec 17 (this location) OR
- 2. trucked to a commercial SWD well.
- a. Operator's Field Representative: Kenn Dastrup, Wolverine Gas & Oil, Well Pad "A", 2475 S Hwy 24, Sigurd, UT 84657 (435) 893-0173
- b. Source of Produced Water: Navajo formation 6378-6388 & 6310-6334, Wolverine Federal 17-2; Lease No UTU-73528; location shown above
- c. Map, quantity to be disposed and water analysis attached.

# THEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)  Steven R Hash - EXACT Engineering Inc	Title	Consulting Engineer (918) 599-94	
Signature · Stum R. Hes	Date	06/07/2005	Oil, Gas and Minin
THIS SPACE FOR FEDERAL	OR	STATE OFFICE USE	TOTTILLOUID ON
Approved by		Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warra certify that the applicant holds legal or equitable title to those rights in the subject leads to be applicant to conduct operations thereon.	ase	Office	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any States any false, fictitious or fraudulent statements or representations as to any matter.	person within	knowingly and willfully to make to a its jurisdiction.	by department or agency of the United

(Instructions on page 2)

AUG 1 0 2005

**EXACT Engineering, Inc.** 

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E. Registered Professional Engineer stevehash@exactengineering.com

August 6, 2005

Mr. Al McKee Bureau of Land Management Utah State Office P.O. Box 45155 Salt Lake City, UT 84145-0155

Re:

Additional Information to Accompany "Interim Proposal for Produced Water Disposal"

Wolverine Federal 17-2 well

Sec 17 T23S R01W Sevier Co, UT API# 43-041-30031

BLM Lease No. UTU-73528

Dear Mr. McKee,

At your request, and on behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed Utah Division of Oil, Gas and Mining approvals for two (2) produced water disposal sites in Uintah County either of which, from time to time, may be utilized by Wolverine to dispose of produced water from the subject well. Please let me know if anything additional is required on our part. We respectfully request that the enclosed information remain confidential.

Sincerely,

Steven R. Hash

**Enclosures** 

Xc: Utah Division of Oil, Gas and Mining, Salt Lake City office, Mr. Dustin Doucet





Dalbo, Inc.

Oil and Water Service
P.O. Box 1168 • Vernal, Utah 84078 • Phone (435) 789-0743

GLEN BENCH TOISPOSAL

DALBO, INC.

DISPOSAL
FACILITY
APPROVAL
AT
GLEN BENCH



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt Governor Robert L. Morgan Executive Director Lowell P. Braxton Division Director 1594 West North Temple, Suite 1210 PO Box 145801 Sait Lake City, Utah 84114-5801 (601) 538-5340 telephone (801) 538-7223 TTY GEN BENGA DISPOSAL

August 20, 2003

Nick Richens Glen Bench Disposal Facility P.O. Box 1168 Vernal, Utah 84078

Subject: Final Approval To Operate A Commercial Evaporative Produced Water Disposal Facility, And Associated Land Farm, Sec. 5 Township 9 South, Range 22 East, Uintah County, Utah.

Dear Mr. Richens,

On November 20, 2002, the Division of Oil, Gas & Mining ("the Division") received your initial submission to construct and operate a produced water disposal facility and associated land farm. The Division published this permit for public notice on March 7, 2003 in the Salt Lake Tribune and in the Deseret News, and on March 5, 2003 in The Vernal Express. There were no public comments received and no formal objections raised by outside parties. Therefore having met all the technical requirements for filing and notice; you are hereby approved as a commercial disposal facility for produced water and oilfield generated nonhazardous exploration and production waste solids. The permit covers Pit #1 & Pit #2, and associated land farming operations of solid wastes.

It is required that minimum of 2 feet of freeboard will be maintained at all times, and that a method of obviously displaying the freeboard for each pit be devised. Spraying water to accelerate evaporation will be closely monitored by your employees and over spray will be eliminated. Over spray outside of the lined pit area is considered an illegal surface discharge, and could result in the closure of the facility. The evaporation pits are to be maintained such that hydrocarbons do not collect on the surface and curtail evaporation. The leak detection system must be checked weekly and its condition documented. In addition Division personnel will conduct periodic visual inspections of the facility and leak detection system. Any leak must be reported to the Division immediately, and corrective measures must be taken. Solid wastes must be treated as set forth in the application and will not be allowed to collect for more than 30 days without being treated. Untreated oily and solid wastes may be subject to full cost bonding if not properly mixed and treatment begun within 30 days after arriving at the facility. The division will determine the amount of the full cost bond in the eventuality that this stipulation is invoked.

Bonding for this facility is due at the time of startup, unless otherwise negotiated with the division. Failure to provide adequate bonding will result in the closure of this facility and restoration of the site to its preconstruction or approved state.



GLEN BENGH DISPOSAL

Nick Richens Page 2 of 2 August 20, 2003

The issuance of this permit does not supersede local ordinances, county planning and zoning requirements, or other permits required to conduct business. This facility is not authorized to take any hazardous wastes, and may be subject to UDEQ and EPA laws if wastes of this nature are collected.

Quarterly reports shall be provided to this office that contain a record of the leak detection system inspections, the water volumes received, and the solid waste volumes received at the facility. Failure to report as outlined herein will be considered a violation of the permit.

A copy of the approval should be kept at the field office, and field personnel are to be made aware of the conditions of approval for this permit. Questions concerning the approval can be directed to Brad Hill at (801) 538-5315, or Gil Hunt at (801) 538-5297, in the Salt Lake office.

Sincerely,

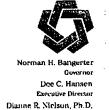
John R. Baza
/Associate Director

ts

ce: Uintah County Planning Office David Hackford Roosevelt Office Richard Powell Tri County Health

ALE DISPOSAL

Aug 02 05 05:20p



# DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL GAS AND MINING

355 West North Temple 3 Triad Center, Suite 350 Satt Lake City, Utah 84180-1203 801-538-5340

February 25, 1991

Mr. Mike Keele Ace Disposal Inc. 827 South 1500 West Vernal, Utah 84078

Dear Mr. Keele:

Re: Approval to Construct Produced Water Disposal Facility, Section 2, Township 6
South, Range 20 East, SLM, Uintah County, Utah

This letter reinstates the approval previously issued to you in our letter dated July 14, 1988, to construct the referenced facility. In addition to the requirements detailed in the July 14, 1988 letter, the Division also requires that a \$10,000.00 bond be furnished to the Division prior to the initiation of any construction activity.

The Division shall be notified as the construction progresses to allow for inspection by Division personnel. Notification shall be given after excavation, prior to installing the leak detection system, and prior to installation of the artificial liner.

This approval does not alleviate the owners of this facility of any responsibility to comply with any other state, local or federal laws or ordinances.

If you have any questions concerning this letter, please contact Brad Hill or Gil Hunt at this office.

Best regards.

Dianne Nielson

Director

BGH/ldc WUI38



# DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ALE DISPOSAL

Michael O. Leavith
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director 355 Wast North Templo 3 Triad Conter, Suite 350 Sati Lake City, Utah 84180-1203

November 8, 1993

Mike Keele Ace Oilfield Disposal Inc. 827 South 1500 West Vernal, Utah 84078

Re: Approval For Use of Produced Water Disposal Pit #3 and Drilling Mud Disposal Pit #3, Ace Oilfield Disposal Inc., Produced Water Disposal Facility, Section 2, Township 6 South, Range 20 East, Uintah County, Utah

Dear Mr. Keele:

A final inspection has been conducted at the above referenced facility regarding the addition of Produced Water Disposal Pit #3 and Drilling Mud Disposal Pit #3 at the facility. Approval is hereby issued for use of the disposal pits for produced water and drilling mud. This approval does not exempt Ace Oilfield Disposal Inc. from complying with all other federal, state and local rules, regulations and ordinances.

By copy of this letter, we are advising Uintah County of our approval as requested in their letter of September 23, 1993.

If you have any questions concerning this approval, please contact Brad Hill or Gil Hunt at this office.

Sincerely,

Associate Director

ldc

cc: Uintah County

J. W. Carter, Director

G. L. Hunt

B. G. Hill

W60

Aug 02 05 05:20p



DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ACE DISPOSAL

Michael O. Leavitt Governor Ted Stewart Executive Director

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84160-1203 801-53B-5340 801-359-3940 (Fax) James W. Carter B01-359-3940 (Fax)
Division Director 801-538-5319 (TDD)

August 20, 1996

Mike Keele Ace Oilfield Disposal Inc. 827 South 1500 West Vernal, Utah 84078

Approval to Construct - Produced Water Disposal Pits #5-#8, Ace Oilfield Disposal Facility, Section 2, Township 6 South, Range 20 East, Uintah County, Utah

Dear Mr. Keele:

Your application to construct additional produced water disposal pits was received on June 12, 1996 and amendments to the application on August 20, 1996. The application has been reviewed by Division staff. The application complies with the requirements for produced water disposal facilities in accordance with Utah Administrative Code R649-9 et al., Oil and Gas General Rules.

Approval to commence construction of the proposed pits is hereby granted. This approval does not exempt you from complying with all other federal, state and local rules and ordinances.

The Division requires that our staff be informed of all phases of construction and be allowed the opportunity for inspection during the construction and installation activities including dike construction, leak detection system emplacement and liner installment.

If you have any questions concerning this approval please contact Brad Hill or Gil Hunt at this office.

Associate Director, Oil and Gas

cc: James W. Carter, Director Lowell P. Braxton, Deputy Director

Gil Hunt # 201-532-5097 Bill Hill = 201-532-5097

Form 3160-5 (April 2004)

3a Address

Öil Well

SHL: 830' FSL & 1901' FWL BHL: 841' FSL & 1732' FWL (TD)

TYPE OF SUBMISSION

Final Abandonment Notice

✓ Notice of Intent

\_\_\_ Subsequent Report

Gas Well

2. Name of Operator Wolverine Gas & Oil Co of Utah, LLC

One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

#### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

OM B No. 1004-013

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

Other

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE,

5. Lease Serial No. UTU-73528 6. If Indian, Allottee or Tribe Name 7. If Unit or CA/Agreement, Name and/or No. Wolverine Fed Exploration Unit 8. Well Name and No. Wolverine Federal #17-2 9. API Well No. 43-041-30031 10. Field and Pool, or Exploratory Area Exploratory 11. County or Parish, State Sevier Co, UT REPORT, OR OTHER DATA Water Shut-Off Production (Start/Resume) Well Integrity Other Temporarily Abandon

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

3h Phone No. (include area code)

TYPE OF ACTION

Reclamation

Recomplete

✓ Water Disposal

616-458-1150

Deepen

→ Plug Back

Fracture Treat

New Construction

Plug and Abandon

Disposal of Produced Water - Permanent Proposal

Produced water will be disposed of by a combination of the following methods:

Acidize

Alter Casing

Casing Repair

Change Plans

Convert to Injection

- 1. Trucked to a water containment pit in section 8, T23S R01W, authority presently applied for with UDOGM and operational by August 2005
- 2. Trucked to a company owned SWD well to be located in section 8, T23S R01W, APD applied for with UDOGM
- 3. Trucked to a commercial SWD well
- a. Source of Produced Water: Navajo formation 6378-6388 & 6310-6334, Wolverine Federal 17-2; Lease No UTU-73528; location shown above
- c. Map, quantity to be disposed and water analysis attached.

PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you

Accepted by the **Utah Division of** Oil, Gas and Mining

FOR RECORD ONLY

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)  Steven R Hash - EXACT Engineering Inc	Title Cor	nsulting Engineer (918) 599-94	000
Signature Steven 12. Hash	Date	06/07/2005	
THIS SPACE FOR FEDERAL	. OR ST	ATE OFFICE USE	
Approved by	Titl	ile	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrar certify that the applicant holds legal or equitable title to those rights in the subject leavhich would entitle the applicant to conduct operations thereon.	nt or ase Off	fice	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any	person know	wingly and willfully to make to a	ny department or agency of the United

Wolverine Federal 17-2 SE SW Sec 17, T23S R01E Sevier Co, UT API# 43-041-30031 UTU-73528

Attachment to Sundry Notice (form 3160-5) for Interim Proposal for Produced Water Disposal

### Quantity of Produced Water

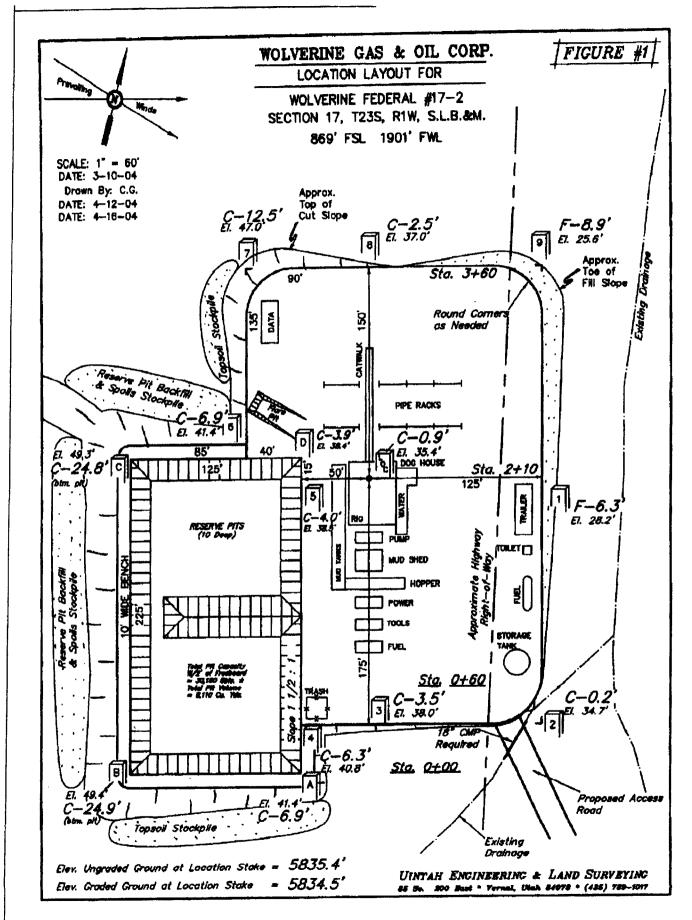
March 2005 4075 barrels April 2005 4797 barrels May 2005 5592 barrels

#### Comments:

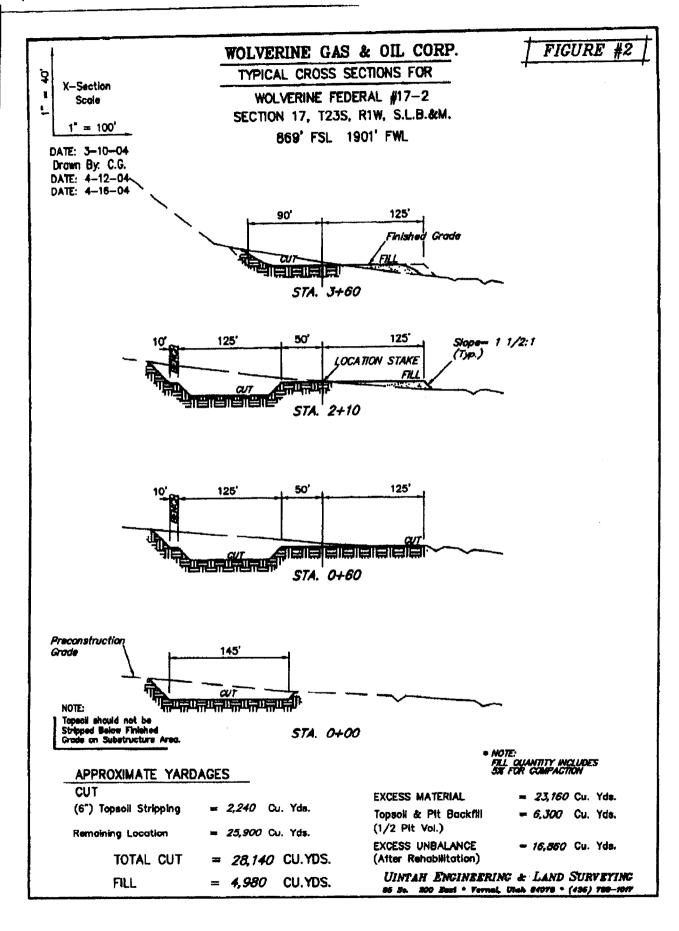
Presently, the Wolverine Federal 17-2 (SE SW Sec 17) produces into Wolverine's temporary production facility (through an approximate 1/2 mile long flowline) located in the SE NW Sec 17 and known as pad A. Here, the produced fluid is separated in the pad A treater facility and the water is commingled with other produced fluid from Wolverine's Kings Meadow Ranches 17-1 well (located at pad A) and the mixture is stored in tanks at the pad A location. Periodically, the stored water is transported to the drill rig at pad A (drilling since December 1, 2004) where it is used as a drilling fluid for the Wolverine Federal wells 17-3, 17-4, 17-5 and 8-1 and the KMR 17-6 (WF 8-1) and KMR 17-7 wells. Excess produced water is occasionally transported by truck back to the Wolverine Federal 17-2 well and placed in the drilling reserve pit there for future use as a drilling fluid. This is an unlined pit with a 12 mil plastic liner and no leak detection. Such use for drilling is anticipated to begin on or about July 1, 2005 at which time drilling will resume on the Wolverine Federal 17-2 location for wells 18-1, 19-1 and 20-1. Once drilling is complete the produced water will be either 1) injected into an approved disposal well (presently applied for) 2) disposed of in an approved lined pit facility (presently applied for) or 3) trucked to an approved commercial SWD facility.

June 8, 2005

p.2



wescern land services



Environmental Services

Petroleum Laboratory

Gas Engineering

www.oilab.com

FEB. 2.2005 12:10PM

OILAB INC

P.1/4 NO.780

5120 N. Ganta Fe Oklahoma City, OK 73118 Ph. (405) 528-TEST(8378)

Fax (405) 962-1870



#### LABORATORY REPORT NUMBER 93601 02/02/2005 WATER ANALYSIS

WOLVERINE GAS & OIL CO.

SEVIER CO/UTAH

COMPANY: EXACT ENGINEERING, INC.

KMR 17-1 LEASE:

LOCATION: SEVIER CO/UTAH

DATE SAMPLED:

1/21/2005

DATE ANALYZED: SAMPLED BY:

1/31/2005 WOLVERINE

RECEIVED FROM: WOLVERINE GAS & OIL

COLOR (BEFORE FILTRATION): COLOR (AFTER FILTRATION):

LIGHT BROWN COLORLESS

	mg/∟
CALCIUM	428
MAGNESIUM	40,8
SODIUM	10,080
POTASSIUM	220
BARIUM	TRACE
IRON	12
SILICA	46
BICARBONATE*	518
CARBONATE**	0
HYDROXIDE	0
SULFATE	3,000
CHLORIDE	14,100
*(AS CaÇQ3)	425
**(AS CaCO3)	O

TOTAL HARDNESS (AS CaCO3)	1,240
P ALKALINITY (AS CaCO3)	0
M ALKALINITY (AS CaCO3)	425
SDEC GRAVITY A 87 F	1.0208

RESISTIVITY @ 77°F TOTAL DISSOLVED SOLIDS

28,400 6.45

0.261

PH VALUE

CERTIFIED BY: SWRESH JOSHI

CHEMIST/ANALYST

FAX: 918-599-9401 STEVEN HASH

**EXACT Engineering Inc** 

**2**003/004

NO.790

P.2/4

FEB. 2.2005 12:10PM

QILAB INC

Environmental Services Potroleum Laboratory Gas Engineering moo.dello.www

02/02/2005 15:20 FAX 918 599 9401



5120 N. Santa Fe Oklahoma City, OK 73118 Ph. (405) 528-TEST(8378) Fax (405) 962-1870

#### LABORATORY REPORT NUMBER 93601 02/02/2005 WATER ANALYSIS

WOLVERINE GAS & OIL CO.

SEVIER CO/UTAH

COMPANY: EXACT ENGINEERING, INC.

WF 17-2 LEASE:

LOCATION: SEVIER OF/UTAH

DATE SAMPLED:

1/21/2005

DATE ANALYZED: SAMPLED BY:

1/31/2005 WOLVERINE

RECEIVED FROM: WOLVERINE GAS & OIL

COLOR (BEFORE FILTRATION): COLOR (AFTER FILTRATION):

LIGHT BROWN

COLORLESS

#### 

	mg/L
CALCIUM	640
MAGNESIUM	216
SODIUM	8,140
POTASSIUM	900
BARIUM	TRACE
IRON	195
SILICA	96
BICARBONATE*	134
CARBONATE"	0
HYDROXIDE	Ó
SULFATE	2,875
CHLORIDE	12,935
*(AB CaCO3)	110
**(AS CaCO3)	0

TOTAL HARDNESS (AS CaCO3)	2,500
PALKALINITY (AS CaCO3)	Q
M ALKALINITY (AS CaCO3)	110
SPEC. GRAVITY @ 67 °F	1,0207

RESISTIVITY @ 77°F TOTAL DISSOLVED SOLIDS

0.279 26.035 5.86

pH VALUE

CERTIFIED BY: SURECH JOSHI

CHEMIST/ANALYST

FAX: 918-599-9401 STEVEN HASH



# WOLVERINE GAS AND OIL COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

# REVISED

August 8, 2005

200 - TV - 1418 200 - TV - 1418

Ms. Terry Catlin
Chief, Branch of Fluid Minerals
United States Department of the Interior
Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

Re:

Review of Operations

October 27, 2004 to March 1, 2005

Plan of Development

March 1, 2005 to March 1, 2006

Approved Effective 8-18-2005

Petroleum Engineer

Bureau of Land Management

Dear Ms. Catlin:

Submitted herewith for your approval is a Review of Operations for the time period of October 27, 2004 to March 1, 2005 and a Plan of Development for the time period of March 1, 2005 to March 1, 2006 for the Wolverine Unit (UTU80800X). This letter supersedes and is in lieu of that previously submitted letter dated February 22, 2005.

REVIEW OF OPERATIONS
October 27, 2004 to March 1, 2005

DINOF OIL, GAS & MINING

2 2004 and completed on
which

The Wolverine Federal 17-2 well was spud on July 2, 2004 and completed on November 1, 2004. The well was drilled to a depth of 6,724 feet (TVD) which adequately tested the Navajo formation. A temporary above-ground flow line has been laid to the Kings Meadow Ranches 17-1 facility.

The Wolverine Federal 17-2 well has been determined by the BLM to be a "well capable of producing unitized substances in paying quantities". The PA has been revised and is now described as the W/2 of Section 17, T23S, R1W, Sevier County, Utah. The BLM approved the revised PA on November 24, 2004, effective November 1, 2004 (See Exhibit "A").

The sales from the Kings Meadow Ranches 17-1 well were 181,344 barrels from May 12, 2004 to January 31, 2005. The sales for the Wolverine Federal 17-2 well were 27,991 barrels from November 24, 2004 to January 31, 2005.

The Wolverine Federal 17-3 was spud on December 10, 2004 from a surface location described as 1,680' FNL and 2,233' FWL (NENW) of Section 17, T23S, R01W, Sevier County, Utah. The well was drilled to a bottom hole location (BHL) described as 2,013' FSL & 435' FWL of Section 17.

The Wolverine Federal 17-4 was spud on January 31, 2005 and drilled to a bottom hole location described as 2,109' FSL & 1,932' FEL (NWSE) of Section 17, T23S, R01W, from a surface location described as 1,680' FNL & 2,249' FWL of Section 17.

The Wolverine Federal 17-5 was spud on March 14, 2005 and drilled to a bottom hole location described as 1,361' FNL & 1,034' FEL of Section 17, T23S, R01W, from a surface location described as 1,680' FNL & 2,281' FWL of Section 17. The Wolverine Federal 17-3, 17-4 and 17-5 wells will be completed after all the wells permitted on the same pad have been drilled.

Wolverine has applied for and received permits for the following wells (See Exhibit "B"):

			<b>Bottom Hole</b>				
Well	State	County	Location	Sec.	Town	Range	Qtr/Qtr
WOLVERINE	UT	Sevier	232' FSL &	8	23-S	01-W	SESE
FEDERAL 8-1			99 <b>CO</b> 175' FSL & 200' FEL 1,216' FNL &				
WOLVERINE	UT	Sevier	175' FSL (1)	C18,_	23-S	01-W	SESE
FEDERAL 18-1			200' FEL	~\V \	In,		
WOLVERINE	UT	Sevier	1,216' FNL &	19	TES-S	01-W	NENE
FEDERAL 19-1			940' FEL				
WOLVERINE	UT	Sevier	695' FNL &	20	23-S	01-W	NWNW
FEDERAL 20-1			617' FWL				
WOLVERINE	UT	Sevier	2,458' FEL &	17	23-S	01-W	NWNE
FEDERAL			721' FNL				
17-6 (WF 8-1)							
KINGS	UT	Sevier	1,113' FWL	17	23-S	01-W	SWNW
MEADOW			& 2,254' FNL				
RANCHES							
17-7							

Wolverine decided not to drill the Wolverine State 16-1 as outlined in the initial plan of unit development. Instead, Wolverine changed the name to the Wolverine Federal 8-1. The Wolverine Federal 8-1 was spud on April 16, 2005 and drilled to 7,824 feet, a depth sufficient to test the Navajo formation. However, the Navajo was not encountered and the 8-1 was plugged back to 2,500 feet. Wolverine requested and was granted permission to use the top portion of the 8-1 well to drill the Wolverine Federal 17-6 (WF 8-1). The Wolverine Federal 17-6 (WF 8-1) was spud on May 15, 2005 and was drilled to the bottom hole location described above. The original Kings Meadow Ranches 17-6, which had been permitted and approved, was renamed the Kings Meadow Ranches 17-7 and spud on June 1, 2005. This well was drilled to the bottom hole location also described above.

The Wolverine Federal 19-1 well was spud on June 30, 2005 at a surface location described as 798' FSL & 1,937' FWL of Section 17, T23S, R01W, and will be drilled to a bottom hole location described as 1,216' FNL & 940' FEL of Section 19, T23S, R01W.

Wolverine is in the process of applying for permits for the wells described below:

Bottom Hole								
Well	State	County	Location	Sec.	Town	Range	Qtr/Qtr	
WOLVERINE	UT	Sevier	2,177' FEL &	19	23-S	01 <b>-</b> W	SWNE	
FEDERAL 19-2			2,292' FNL					
WOLVERINE	UT	Sevier	2947 FEL &	19	23-S	01-W	NESE	
FEDERAL 19-3			2,633					
WOLVERINE	UT	Sevier	2,633 660' FSL & 2,000' FEL	£16.	21-S	01-E	SWSE	
STATE			2,000' FEL	-/V/	A.			
TWIST				• //	4[	•		
CANYON 16-1								
WOLVERINE	UT	Sevier	660' FWL &	21	21-S	01-E	SWSE	
FEDERAL			2,019' FNL					
TWIST								
CANYON 21-1								
WOLVERINE	UT	Sanpete	161' FNL &	26	20-S	01-E	NENE	
ARAPIEN			1,224' FEL					
VALLEY 26-1								
WOLVERINE	UT	Sanpete	2,069L' FWL	24	20-S	01-E	NENW	
FEDERAL			& 460' FNL					
ARAPIEN								
VALLEY 24-1								

## PLAN OF DEVELOPMENT

March 1, 2005 to March 1, 2006

In addition to the development outlined above that has occurred since March 1, 2005, Wolverine plans the following development of the Unit area through March 1, 2006:

The Wolverine Federal 20-1 well will be drilled after the 19-1 at a surface location described as 845' FSL & 1,922' FWL of Section 17, T23S, R01W, to a bottom hole location described as 695' FNL & 617' FWL of Section 20, T23S, R01W.

The Wolverine Federal 18-1 well will be drilled after the 20-1 at a surface location described as 833' FSL & 1,925' FWL of Section 17, T23S, R01W, to a bottom hole location described as 175' FSL & 200' FEL of Section 18, T23S, R01W.

Wolverine will permit and drill the Wolverine State Twist Canyon 16-1 well as the second Public Interest Well in accordance with the Wolverine Unit Agreement (UTU80800X) in the second half of 2005. The well will be drilled after the 18-1 at a surface location described as 880' FWL & 2,561' FNL of Section 16, T21S, R1E to a bottom hole location described as 660' FSL & 2,000' FEL of Section 16.

Wolverine will permit and possibly drill the Wolverine Arapien Valley 24-1 well after the Twist Canyon 16-1 as the third Public Interest Well in accordance with the Wolverine Unit Agreement (UTU80800%) in the second half of 2005. The well will be drilled at a surface location described as 696 WW 2.358' FNL of Section 24, T20S, R1E to a bottom hole location described as 2,069' FWI 250' FNL of Section 24.

The Wolverine Federal 19-2 and Federal 19-3 may or may not be drilled depending on the outcome of the 18-1, 19-1 and 20-1 wells. If drilled, the 19-2 will be drilled after the Twist Canyon 16-1 at a surface location described as 2,165 FWL & 1,176 FSL of Section 19, T23S, R01W, to a bottom hole location described as 2,177' FEL & 2,292' FNL of Section 19, T23S, R01W, and the Wolverine Federal 19-3 well will drilled be at a surface location described as 2,169' FWL & 1,160' FSL of Section 19 to a bottom hole location described as 294' FEL & 2,635' FSL of Section 19.

Wolverine is also in the process of applying for the permit to drill a salt water disposal (SWD) well. The SWD well will be drilled on the facility site described below with a surface location described as 1,140' FSL & 30' FWL of Section 8 and to a depth of 9,500 feet. The disposal zone will be the Navajo formation.

Wolverine has begun the construction of a Central Production Facility in part of the SWSW of Section 8, T23S, R01W, and the SESE of Section 7, T23S, R01W, Sevier County, Utah. The facility will handle between 5,000 and 10,000 barrels of oil per day.

Wolverine will shoot a 155 mile seismic program over the Wolverine Unit in the summer of 2005 (See Exhibit "C").

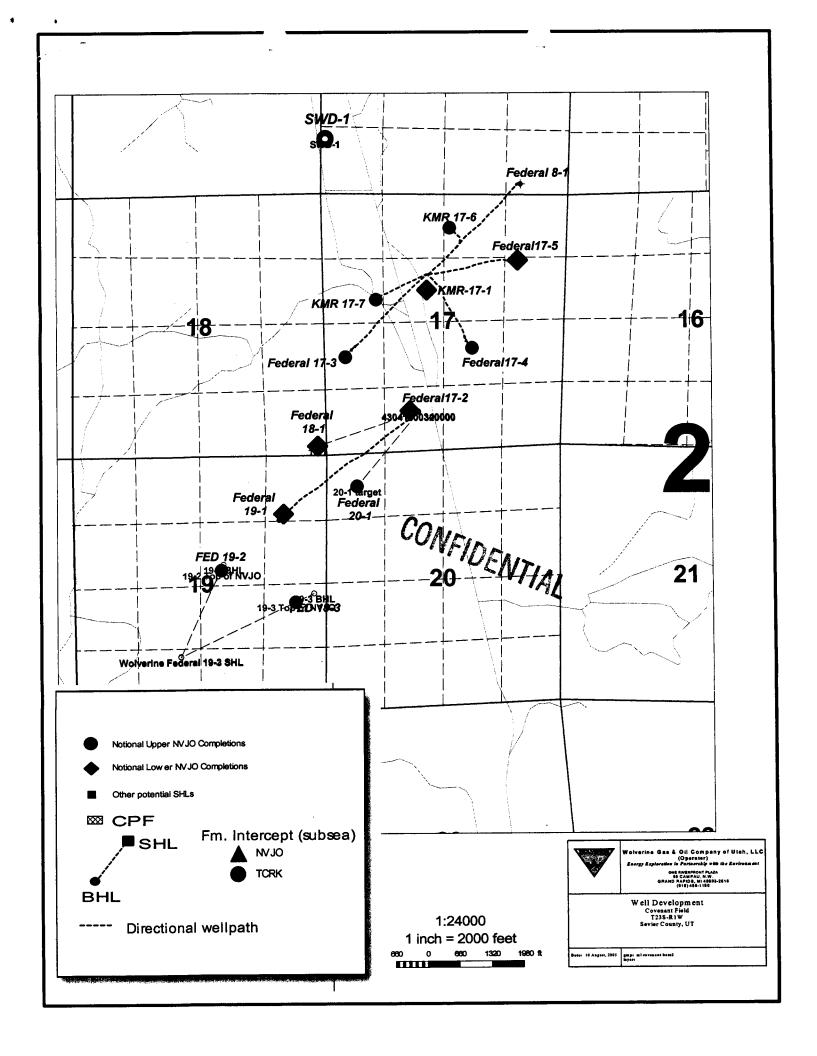
Please keep this letter and all of the enclosures confidential. If you have any questions or need any additional information, please don't hesitate to contact the undersigned.

Very/tyuly,

Richard D. Moritz

Vice President Land

CONFIDENTIAL



31. INITIAL PRO	DDUCTION			INT	ERVAL A (As sho	wn in item #26)				
DATE FIRST PR		TEST DATE: HOURS TESTED:		D:	TEST PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL	: PROD. METHOD:	
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL	: INTERVAL STATU
	<u> </u>			INT	ERVAL B (As sho	wn in item #26)	- A			
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTER	D:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER - BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER - BBL	: INTERVAL STATU
	· · · · · · · · · · · · · · · · · · ·			INT	ERVAL C (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTER	HOURS TESTED:		OIL – BBL:	GAS – MCF:	WATER - BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL BBL:	GAS – MCF:	WATER - BBL	: INTERVAL STATU
	<u> </u>	<u></u>		INT	ERVAL D (As sho	wn in item #26)	•	•		
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL	: PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL	: INTERVAL STATU
32. DISPOSITIO	ON OF GAS (Sold	, Used for Fuel, V	ented, Etc.)						<b>-</b>	
33. SUMMARY	OF POROUS ZO!	NES (Include Aqu	ifers):		<del></del> -		34. FORMATION	(Log) MARKERS:		
Show all importatested, cushion to	int zones of poros used, time tool ope	ity and contents the en, flowing and shu	ereof: Cored intent it-in pressures and	vals and all drill-sten I recoveries.	n tests, including de	epth interval				
Formation	on	Top Bottom (MD)		Descrip	Descriptions, Contents, etc.			Name		Top (Measured Depth)
	;									

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information i	s complete and correct as determined from all available records
--	---

NAME (PLEASE PRINT

SIGNATURE

DATE

This report must be submitted within 30 days of

- completing or plugging a new well
- · drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- · reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

801-359-3940 Fax:

CONFIDENTIAL



# WOLVERINE OPERATING COMPANY

of Utah, LLC

Energy Exploration in Partnership with the Environment

December 28, 2005

Ms. Diana Whitney Utah Division of Oil, Gas & Mining 1594 W. N. Temple, Suite 1210 Salt Lake City, UT 84114-5801

RE:

Wolverine Federal #17-2

Wolverine Federal #17-3 Wolverine Federal #8-1

Dear Ms. Whitney:

Enclosed please find completion forms with minor corrections made for each of the above referenced wells.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Helene Bardolph

cc:

WF #17-2 (Well Log File)

WF #17-3 (Well Log File) WF #8-1 (Well Log File)

RECEIVED

JAN 0 3 2006

DIV. OF OIL, GAS & MINING

		-		TMEN	'A₁⊏ C TOFNA	TURAL	RESO						(hig	hlight o	REPORT	-	FORM 8
		D	IVISIO	O NC	F OIL,	GAS	AND N	MINING	G				1	JTU-7	SIGNATION AN 3528	ID SEF	IAL NUMBER:
WELI	L COM	PLET	ION	OR F	RECO	MPL	ETIO	N RE	POF	RT ANI	D LOG			INDIAN,	ALLOTTEE OF	TRIBE	NAME
1a. TYPE OF WELL	:	OII	LL 🗹	(	GAS E		DRY [		отн	ER					AGREEMENT		
b. TYPE OF WORK NEW WELL	(; HORIZ. LATS.	DE	EP-	į	RE- ENTRY	٦	DIFF. RESVR.	_	отн	FR					E and NUMBE		<b>‡17-2</b>
2. NAME OF OPERA Wolverine	ATOR:					•	KLOVK. L							PI NUMBE	ER: 30031		
3. ADDRESS OF OF 55 Campau	PERATOR:		⊤y <b>Gr</b> a	***		STATE	MI	zıp <b>49</b> 5	503		NUMBER:	150	10 FI	ELD AND	POOL, OR W		ī
4. LOCATION OF W	ELL (FOOTAG	GES)				JIAIL		Z.11			,		1		, SECTION, TO		IIP, RANGE,
AT SURFACE:	830' FSL	_ & 191	10' FW	/L, Se	ec 17								1	SW			11W 26
AT TOP PRODUC	CING INTERV	AL REPOR	RTED BEL	.ow: 8	10' FS	L & 1	780' F	WL, S	ec 17								
AT TOTAL DEPT	н: <b>841' F</b>	FSL &	1732'	FWL,	Sec 17	7								COUNTY Sevier		13	STATE UTAH
14. DATE SPUDDED 7/22/2004		5. DATE T. 8/16/2		HED:	16. DATE	COMPL /2004		A	BANDON	ED 🗌	READY TO I	PRODUC	E 🗾		VATIONS (DF, 846 5847		
18. TOTAL DEPTH:	<sup>MD</sup> 6,7		1	9. PLUG	BACK T.D		6,698 6,672		20. IF I	MULTIPLE C	OMPLETIONS	S, HOW N	MANY? *		TH BRIDGE UG SET:	MD TVD	
22. TYPE ELECTRIC			ICAL LOG	S RUN (	Submit cop				<u> </u>	23.							
Density Neu	tron; Dua	al Late	rolog/l	MSFL	; Micro	olog; E	EMI; So	onic		WAS DST	LL CORED? RUN? DNAL SURVE	<b>(?</b>	NO NO NO		YES 🔽		t analysis) t report) t copy)
24. CASING AND L	NER RECORI	D (Report a	all strings	set in w	ell)												
HOLE SIZE	SIZE/GRA	NDE	WEIGHT	(#/ft.)	TOP (	MD)	вотто	M (MD)		EPTH	CEMENT T NO. OF S		SLUF VOLUMI		CEMENT TO	)P **	AMOUNT PULLED
18.00"	14"				1:	2	9:	2			G	250	3	7	surfac	е	zero
12.25"	9.63≝	J55	36	5	12	2	1,5	542			Lite	360	11		surfac	е	zero
											Type 5	280	4:				
8.75"	ļ	110	23		12	_	5,4				50:50 pc		18		1500		zero
6.25"	4.5 P	110	11.	6	12	2	6,7	50				90	1	9	5610	) <b>'</b>	zero
25. TUBING RECOR	L RD														l		
SIZE	DEPTH S	SET (MD)	PACK	ER SET (	MD)	SIZE		DEPTH	SET (MD	PACKE	R SET (MD)		SIZE		EPTH SET (MI	D)	PACKER SET (MD)
21375	ŧ	5															
26. PRODUCING IN	TERVALS									27. PERFC	RATION REC	ORD					
FORMATION	NAME	TOP	(MD)	вотто	OM (MD)	TOP	(TVD)	вотто	M (TVD)	INTERV	AL (Top/Bot -	MD)	SIZE	NO. HOL	ES PEI	RFORA	TION STATUS
(A) Navajo		6,0	)58	6,	750	6,0	036			6,378	6,	388	10'	40	Open	Z] :	Squeezed
(B) Navajo		6,0	)58	6,	750	6,0	036			6,310	6,	334	24'	96	Open	<u>Z</u>	Squeezed
(C)															Open	] :	Squeezed
(D)															Open	] ;	Squeezed
28. ACID, FRACTUI	RE, TREATME	NT, CEME	NT SQUE	EZE, ET	C.									D	ECEI\	Æ	<u> </u>
DEPTH	INTERVAL								АМ	OUNT AND	TYPE OF MA	ERIAL					
6378 - 6388			1000	gal 7	7-1/2%	NEH	CL w/	60 /BS	3						AN 03	<u> 2008</u>	j
6310 - 6334			1500	gal 7	7-1/2%	NEH	CL w/	190 B	S								
														אום. 01	FOIL, GAS	8 M	INING
29. ENCLOSED AT	TACHMENTS:	-															STATUS:

ELECTRICAL/MECHANICAL LOGS

GEOLOGIC REPORT

DST REPORT

DIRECTIONAL SURVEY

CORE ANALYSIS

OTHER: Mud Log

CONFIDENTIAL

Producing

Sundry Number: 34808 API Well Number: 43041300310000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN	-	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: WOLVERINE
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-2
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COM	//PANY OF UTAH, LLC		9. API NUMBER: 43041300310000
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	mpau NW, Grand Rapids, MI, 49503	PHONE NUMBER: 616 458-1150 Ext	9. FIELD and POOL or WILDCAT: COVENANT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0830 FSL 1910 FWL			COUNTY: SEVIER
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 7 Township: 23.0S Range: 01.0W Merid	lian: S	STATE: UTAH
11. CHECK	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
✓ NOTICE OF INTENT  Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
4/10/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
SUBSEQUENT REPORT Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	✓ other	OTHER: Workover
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	all pertinent details including dates, d	epths, volumes, etc.
Wolverine Federal and Navajo perforation	and Oil Co. of Utah, LLC inte 17-2 to recomplete additiona n intervals. Subsequent acid	l pay, between existing stimulations are then	Accepted by the Utah Division of Oil, Gas and Mining
· ·	n ESP will be run to return th itted after work has been co	•	Date: February 19, 2013
	e actual work activities perfo	-	By: Dor K Out
NAME (PLEASE PRINT)	PHONE NUMBI		
Helene Bardolph	616 458-1150	Engineering Administrative	Assistant
SIGNATURE N/A		<b>DATE</b> 2/19/2013	

Form 3160-5 (September 2001)

☐ Final Abandonment Notice

#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

FORM APPROVED OMB No. 1004-0135 Expires January 31, 2004

SHAPPY NOTICES AND DEPORTS ON WELLS

Change Plans

Convert to Injection

5. Lease Serial No.

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.					6. If Indian, Allottee or Tribe Name N/A			
1. Type of Well	IPLICATE - Other instru	ctions on reverse	side		CA/Agreement, Name and/or No. Federal Unit			
☑ Oil Well ☐ Gas Well	☐ Other			8. Well Nan				
2. Name of Operator	anany - f			Wolverine	Federal 17-2			
Wolverine Gas & Oil Con	npany of Otan, LLC		· · · · · · · · · · · · · · · · · · ·	9. API Well	No.			
3a. Address		3b. Phone No. (include	e area code)	43-041-30	031			
55 Campau NW, Grand F	Rapids, MI 49503	616-458-1150	10-458-1150 10. Field and Pool, or Exploratory Area					
4. Location of Well (Footage, Sec	., T., R., M., or Survey Description)			Covenant				
SHL: 830' FSL & 1901' F	WL			11. County of	r Parish, State			
BHL: 841' FSL & 1732' F	WL (TD) 23S	IW 1	1	Sevier				
12. CHECK AF	PROPRIATE BOX(ES) TO	INDICATE NATUI	RE OF NOTICE, RI	EPORT, OR	OTHER DATA			
TYPE OF SUBMISSION		TY	PE OF ACTION					
✓ Notice of Intent  ☐ Subsequent Report	☐ Acidize ☐ Alter Casing ☐ Casing Repair	☐ Deepen ☐ Fracture Treat ☐ New Construction	Production (Start Reclamation Recomplete	/Resume) [	<ul><li>Water Shut-Off</li><li>Well Integrity</li><li>✓ Other Workover</li></ul>			

Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is reach for final improving. determined that the site is ready for final inspection.)

☐ Temporarily Abandon

■ Water Disposal

Plug and Abandon

☐ Plug Back

Wolverine Gas and Oil Co. of Utah, LLC intends to workover the Wolverine Federal 17-2 to recomplete additional pay, between existing Navajo perforation intervals. Subsequent acid stimulations are then planned, before an ESP will be run to return the well to production. A report will be submitted after work has been completed, to summarize the actual work activities performed.

RECEIVED

RECEIVED MAR 0 8 2013

FEB 25 2013

DIV. OF OIL, GAS & MINING

Richfield BLM Field Office

<ol> <li>I hereby certify that the foregoing is true and correct Name (Printed/Typed)</li> <li>Ron Meredith</li> </ol>	Title	Senior Production	ı Engineer
Signature & Mentiles	Date	02/19/2013	
THIS SPA	CE FOR FEDERAL OR	STATE OFFICE U	SE
Approved by Accepted For Record P	urposes	Title	Date
Conditions of approval, if any, are attached. Approval of this certify that the applicant holds legal or equitable title to those which would entitle the applicant to conduct operations thereon.	notice does not warrant or	Office	a*** k
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, States any false, fictitious or fraudulent statements or representat	make it a crime for any persions as to any matter within i	on knowingly and willfuts jurisdiction.	ully to make to any department or agency of the Linited

Survey # 135LA00355

			FORMS					
	STATE OF UTAH		FORM 9					
	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN	<del></del>	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528					
SUNDF	RY NOTICES AND REPORTS (	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
	oposals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: WOLVERINE					
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: WOLVERINE FED 17-2					
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COI	MPANY OF UTAH, LLC		9. API NUMBER: 43041300310000					
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Ca	ampau NW, Grand Rapids, MI, 49503	PHONE NUMBER: 616 458-1150 Ex	9. FIELD and POOL or WILDCAT:					
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0830 FSL 1910 FWL			COUNTY: SEVIER					
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 17 Township: 23.0S Range: 01.0W Meric	ian: S	STATE: UTAH					
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA					
TYPE OF SUBMISSION		TYPE OF ACTION						
	ACIDIZE	ALTER CASING	CASING REPAIR					
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME					
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE					
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	New construction					
4/25/2013	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK					
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION					
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON					
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL					
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION					
Report Date.								
			·					
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Wolverine completed a workover on the Wolverine Federal #17-2 on April 25, 2013. New Navajo perforations were added from 6352'-6368' (16') with 3-3/8", 6 spf, casing guns and a wireline unit. After perforating, tubing and a packer were run to 6269' and all existing Navajo perf intervals (6310' − 6388') were acidized together. The treatment consisted of 4,800 gals of 7½% HCl and was pumped at an average pressure of 1450 psi. After displacing the acid and rigging down pumping equipment, the well was swabbed and the entire load volume was recovered. The well was returned to production at 107 BOPD and 685 BWPD. See attached WBD and Daily Reports for additional details.								
NAME (PLEASE PRINT) Helene Bardolph	<b>PHONE NUMB</b> 616 458-1150	ER TITLE Engineering Administrative	Assistant					
SIGNATURE N/A		<b>DATE</b> 5/9/2013						



Covenant Field

Federal 17-2

SE/SW Sec 17, T23N, R1W

API# 43-041-30031

Sevier County, Utah

4/14/2013

Roustabouts Spotted frac tanks, water filtration system, BOP's and flowback equipment, hooked up flowback lines, laid down oil absorbent around the well head, hooked up frac tanks and filled them with 4% KCL.

4/15/2013

Rig up service unit, rig up vac truck to the casing, ND wellhead, pumped 7 bbls of completion fluid down the tubing, NU BOP's. RU cable spooler and pulled out of the hole with ESP equipment, PU 3-%" bit and casing scraper and tripped in the hole with 4 joints then encountered problems with the workover rig. SWIFN

4/16/2013

Opened well, 40 psi tubing, 40 psi casing, hooked up vac

truck to the casing and finished tripping in the hole with the bit and casing scraper to PBTD. RU pump lines and reverse circulated the well with 120 bbls of completion fluid and still had dirty returns, continued circulating with 40 bbls of completion fluid until the returns were clear. RD pump lines and tripped out of the hole with the bit and casing scraper. SWIFN

Note: Tagged PBTD @ 6698; MD.

4/17/2013

Opened well, 0 psi tubing, 0 psi casing. PU and trip in hole with plug, RH, 4' sub, 1 joint 2-%" tubing, cup type SN and tubing to surface. Set bridge plug at 6343', set packer at 6270', RU swab equipment and swabbed well as follows:

Swab runs - 13

Total fluid recovered - 87 bbls

Perf intervals open -6310-6334'

RD swab equipment, released plug and packer. Reset RBP at 6405', set packer at 6270'. RU swab equip. and swabbed well as follows.

Swab runs - 4

Total fluid recovered - 43 bbls

Perf intervals open -6378-6388'

Note: Shut down swabbing after run 4 due to communication from the upper perf interval.

4/18/2013

Opened well, 0 psi tubing, 0 psi casing. Released packer and reset at 6240', pressure tested to 1200 psi, released packer and reset at 6343', RU swab equipment and made 4 swab runs and verified communication behind pipe. Released packer and pulled out of the hole with tubing and packer.

Note: Due to behind pipe communication between perf intervals 6310 and 6388 we will perforate

the new interval from 6352-6368' then acidize all three of the intervals from 6310 to 6388 at one time.

4/19/2013

Opened well, 0 psi tubing, 0 psi casing. Pulled out of hole with kill joints, RU Wireline unit and perforated 6352-6368' with 3%" gun loaded 6 spf on 60° Phasing.

RD and released wireline unit. PU and tripped in hole with tubing and HD packer to 6269', RU Halliburton acid equipment, opened by-pass on packer and spotted 23 bbls of 7-½% HCL acid, closed by-pass on packer, pressured annulus to 560 psi, pumped the remaining 91 bbls of acid at 1.7 bpm @ 1460 psi and displaced with 25-½ bbls of completion fluid. RD and released acid equipment.

RD and released acid equipment, RU swab equipment and swabbed well as follows:

Swab runs - 9

Total fluid recovered - 65 bbls

Perf intervals open -6310-6388'

4/20/2013

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed the well as follows:

Page 1 of 2

**Daily Activity** 

Swab runs - 26

Total fluid recovered - 225 bbls Perf intervals open -6310-6388'

**SWIFN** 

4/21/2013 Opened well, 0 psi tubing, 0 psi casing. Released packer and reset at 6343' to swab the middle and the

bottom perf intervals only. RU swab equipment and swabbed well as follows.

Swab runs - 16

Total fluid recovered - 158 bbls Perf intervals open -6352-6388'

RD swab equipment, pulled out of hole with tubing, packer and plug. RIH with one stand and SWIFN.

<u>4/22/2013</u>

No activity

4/23/2013

No activity
No activity

4/24/2013 4/25/2013

Opened well, 0 psi tubing, 0 psi casing. RU cable spoolers and TIH with Centinel, motor, seal section, pump,

6' x 2 %" sub, drain sub, 1 joint 2 %" tubing, 2 %" XN nipple, 193 joints 2 %" tubing and 2 %" x 2 %" XO.

ND BOP's, NU wellhead. RDMOSU and started well.

Note: Installed new stainless steel wellhead piping on the well due to failures with the internal coating on the wellhead piping that was installed on the well previously.

Supervisor:

7 ony E. Cook

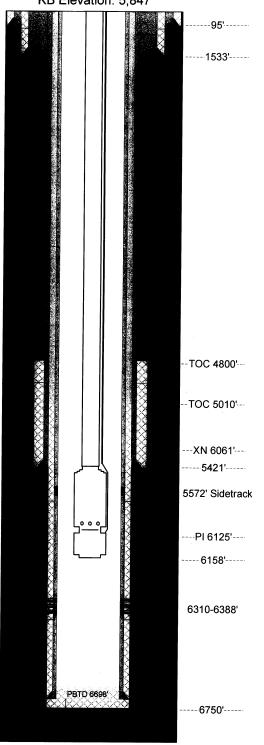
Rig Operator:



Wolverine Federal 17-2 API # 43-041-30031 Covenant Field Section 17, T23S, R1W Sevier County, Utah

#### (Not to Scale)

Ground Elevation: 5,835' KB Elevation: 5,847'



#### **Deviated Well**

Surface: 830' FSL, 1910' FWL, SE SW, 17-23S-1W Top of Pay (6058' MD): 808' FSL, 1789' FWL, SE SW, 17-23S-1W Total Depth (6750' MD): 841' FSL, 1741' FWL, SE SW, 17-23S-1W

#### **Conductor Casing**

Size: 14"

Depth Landed: 92'

Cement Data: Cemented to surface with 250 sks Class "G"

#### Surface Casing (7/4/04)

Size/Wt/Grade: 9-5/8", 36#, J-55, STC, 8rd

Depth Landed: 1533' MD

Cement Data: 360 sks Light (12.8 ppg, 1.78 cf/sk), 280 sks Type V (15.6

ppg, 1.18 cf/sk)

#### Intermediate Casing (7/20/04)

Size/Wt/Grade: 7", 23#, HCP-110, LTC, 8rd

Depth Landed: 5421' MD

Cement Data: 595 sks 50:50 Poz (13.0 ppg, 1.71 cf/sk), 90 sks Type 5

(15.8 ppg, 1.16 cf/sk) Est. TOC @ 4800'

#### **Production Casing (8/21/04)**

Size/Wt/Grade: 4-1/2", 11.6#, N-80, LTC, 8rd

Properties: 7780 psi burst, 3.875" drift, 4.000" ID, 0.0155 Bbl/ft Capacity

Depth Landed: 6750' MD (Estimated)

Cement Data: 95 sks 50:50 Poz (13.4 ppg, 1.49 cf/sk)

#### **Navajo Perforations**

6310' - 6334' MD (6286'-6310' TVD), 24', 96 holes (10/29/04)

6352' - 6368' MD (6328'-6344' TVD), 16', 96 holes (04/19/13)

6378' - 6388' MD (6354'-6364' TVD), 10', 40 holes (10/24/04)

Mid-Perf = 6349' MD (6325' TVD), 50' M (50' TV), 232 holes

#### Tubing (04/25/13)

XN Nipple 6058' WLM (5793' TVD)

ESP Intake 6122' WLM (5855' TVD) Centinel 6151' WLM (5883' TVD)

End of BHA 6155' WLM (5887' TVD)

-114 OF DETA 0100 VVEIVE (3007 1 VD)

#### Fish (8/8/04)

6050' - 6128' KB, Core bit, core barrel, jars, float sub, x-over, and 1 jt HWDP cemented in open-hole. KO @ 5572' KB to sidetrack.

#### **PBTD**

(04/19/13) Tubing tagged @ 6698 'MD

(08/19/08) Tubing tagged @ 6698' MD

(10/23/04) Tubing tagged @ 6698' MD



Wolverine Federal 17-2 API # 43-041-30031 Covenant Field Section 17, T23S, R1W Sevier County, Utah

Tubir	ng Detail (4/25/1	3)
ĺ	12.00	KB
	-3.00	Landed above GL
	-3.00	Wireline correction
1	0.21	X-over - 2-3/8", EUE, 8rd cplg x 2-7/8", EUE, 8rd pin
193	6054.93	Tubing - 2-3/8", 4.7#, N-80, EUE, 8rd
1	1.10	XN Nipple
1	31.31	2-3/8" 4.7#, N-80, EUE, 8rd
1	0.45	Drain sub
1	6.30	Tubing Sub - 2-3/8", 4.7#, N-80, EUE, 8rd
1	0.44	Pump discharge
1	11.95	Pump
1	12.78	Pump with intake
1	9.10	Seal
1	18.95	Motor
1	4.10	Centinel
	6457 601 505	(F000) Tr (D)
	6157.62' EOT	(2888.100)

Note: No check in this well.

Tubing capacity = 0.00387 Bbl/ft, Burst = 11200 psi, Joint Yield = 104300 lbs

<u>Directional</u>	Data:					
MD 500 1000 1500 2000 2250 2500 3000 3500	TVD 500 999 1499 1996 2243 2491 2891 3488	Incl. 2.1 3.7 2.7 8.6 9.7 3.5 27.1 3.9	MD 4000 4500 5000 5500 6000 6500 6750	TVD 3987 4486 4981 5478 5977 6475 6724	Incl. 5.3 3.7 10.1 2.8 5.2 4.9 6.0 E	

#### **Wellhead Information**

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection

#### **Stimulation**

04/19/13: All perfs were treated with 114 bbls of 7½% FE acid (10 gpt FE-1A & 10 gpt FE-2A) with 2 gpt HAI-404M corrosion inhibitor, 5 gpt Pen-88M penetrating agent, and 5 gpt AS-5 Anti-sludge. ATR 1.7 BPM @ 1460 psi.

10/26/04: 6378' - 6388' w/ 1000 gal 7.5% HCl with Morflo III. BDP = 3800 psi, ATR = 3.6 BPM @ 3400 psi, ISIP = 950 psi

10/30/04: 6310' - 6334' w/ 2500 gal 7.5% HCl with Morflo III. ATR = 4.3 BPM @ 3000 psi, ISIP = 933 psi

#### **Notes**

Surface Location: Latitude = 38° 47′ 51.07″, Longitude = -111° 56′ 05.24″

Originally reported landing depth for production casing is incorrect; it appears the casing collars were excluded from casing tally. Assumed casing was run to TD.

(10/23/04): Cement top at 5610' on CBL-CCL-GR

(1/16/07): Available Logs: DLL, SDL/DSN, EMI, CBL, SFT, FWS